

# GEORGE ENGELMANN BOTANICAL NOTEBOOKS

*Pagination Note:  
Since many of the items lack a specific  
page number, the page number displayed  
online refers to the sequentially created  
number each item was given upon  
cataloging the materials.*

5 tab

7

*P. Agathis*  
(& *strobliformis*)

51-9



0 1 2 3 4 5 6 7 8 9 10  
cm

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MISSOURI  
BOTANICAL  
GARDEN

10995

MISSOURI BOTANICAL GARDEN  
GEORGE ENGELMANN PAPERS



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cm

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GARDEN

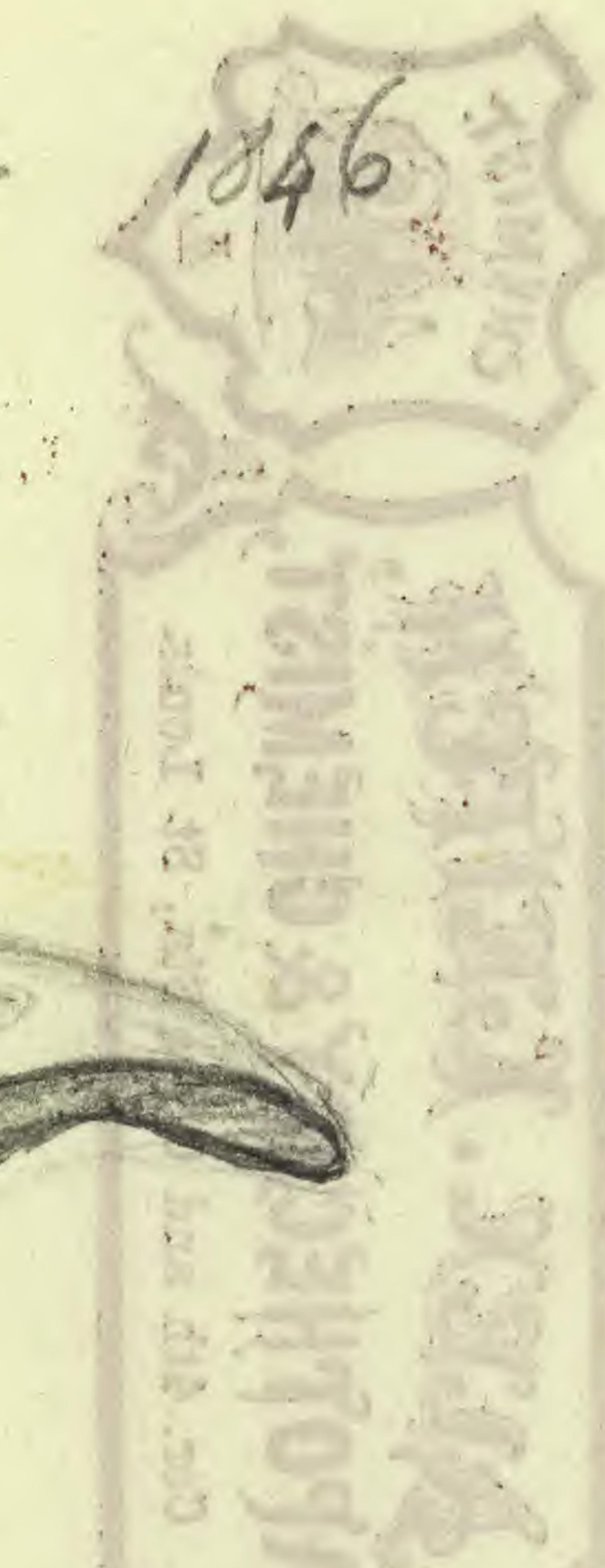
*Pinus strobus* L.

Nov 1862

Coniferinach

Dr. W. L. Jr.

1846



Cone 11 inches long at base over 3 inches thick

goules  $\frac{8}{13}$  arranged (no seeds seen)  
<sup>supposed</sup>

seeds 6-7 cm long with a narrow, triangular wing  
apparently compressed scarcely more than a line wide



0 1 2 3 4 5 6 7 8 9 10

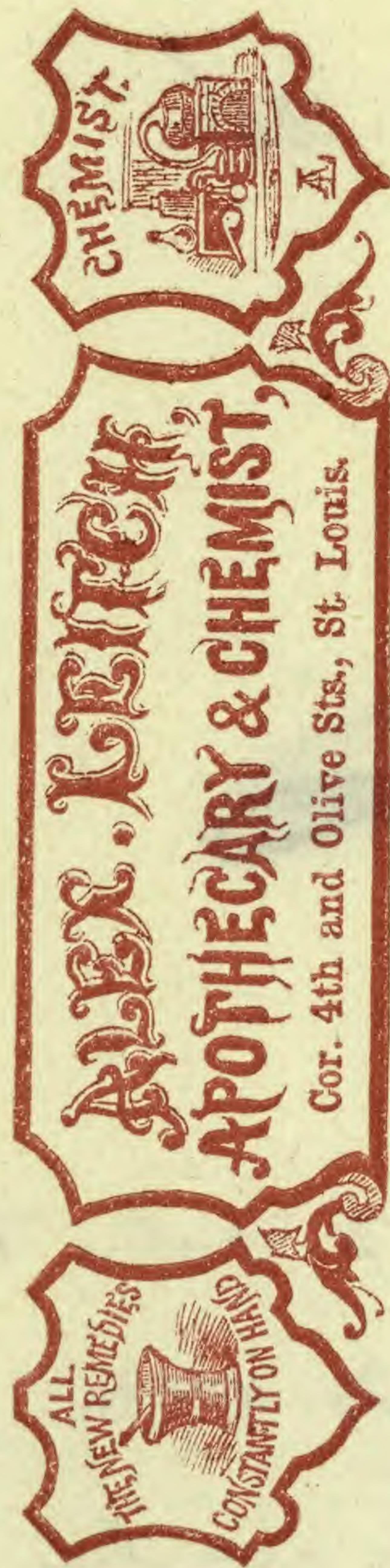
cm

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cm

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*Pinus Ayacahuite*

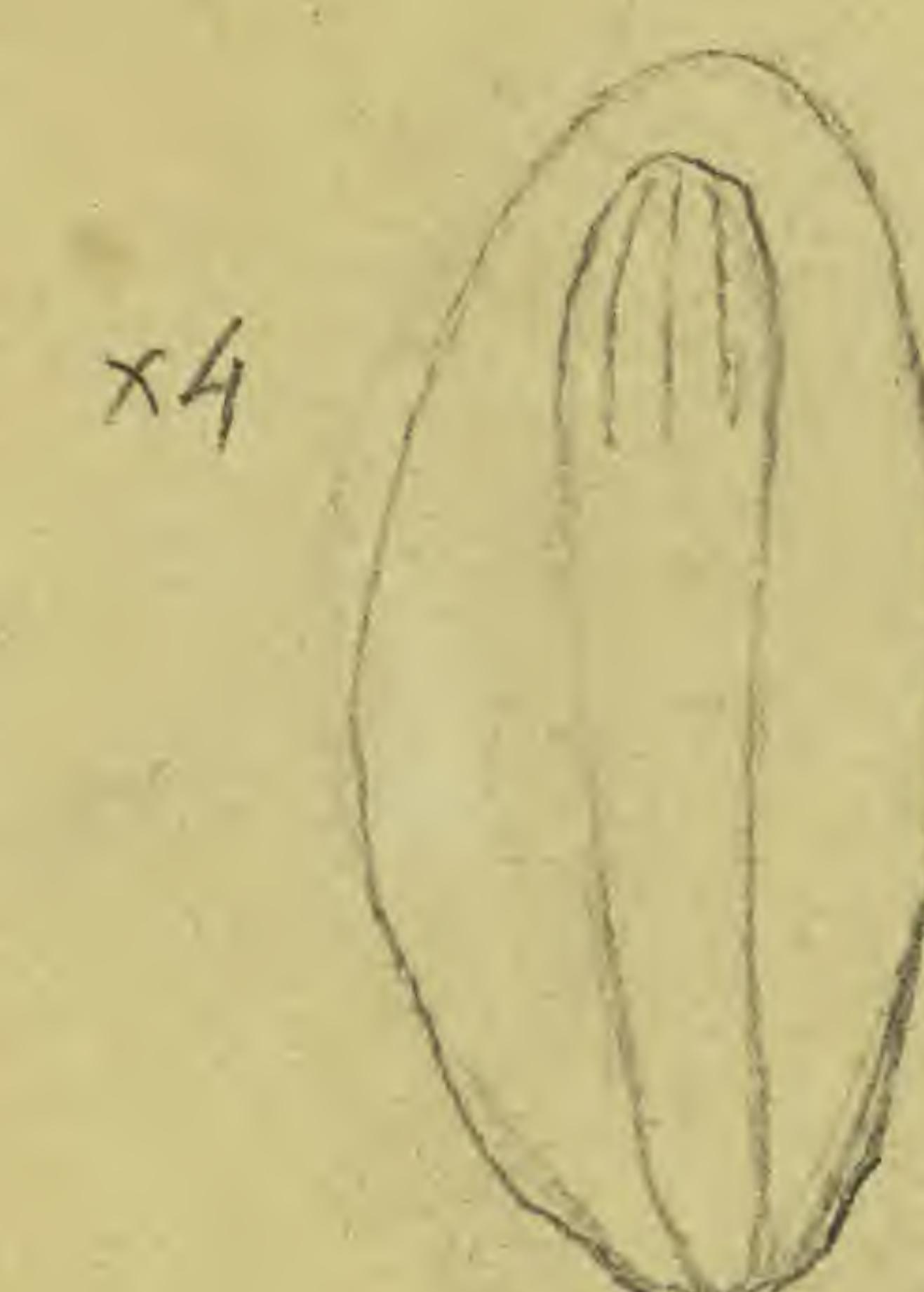
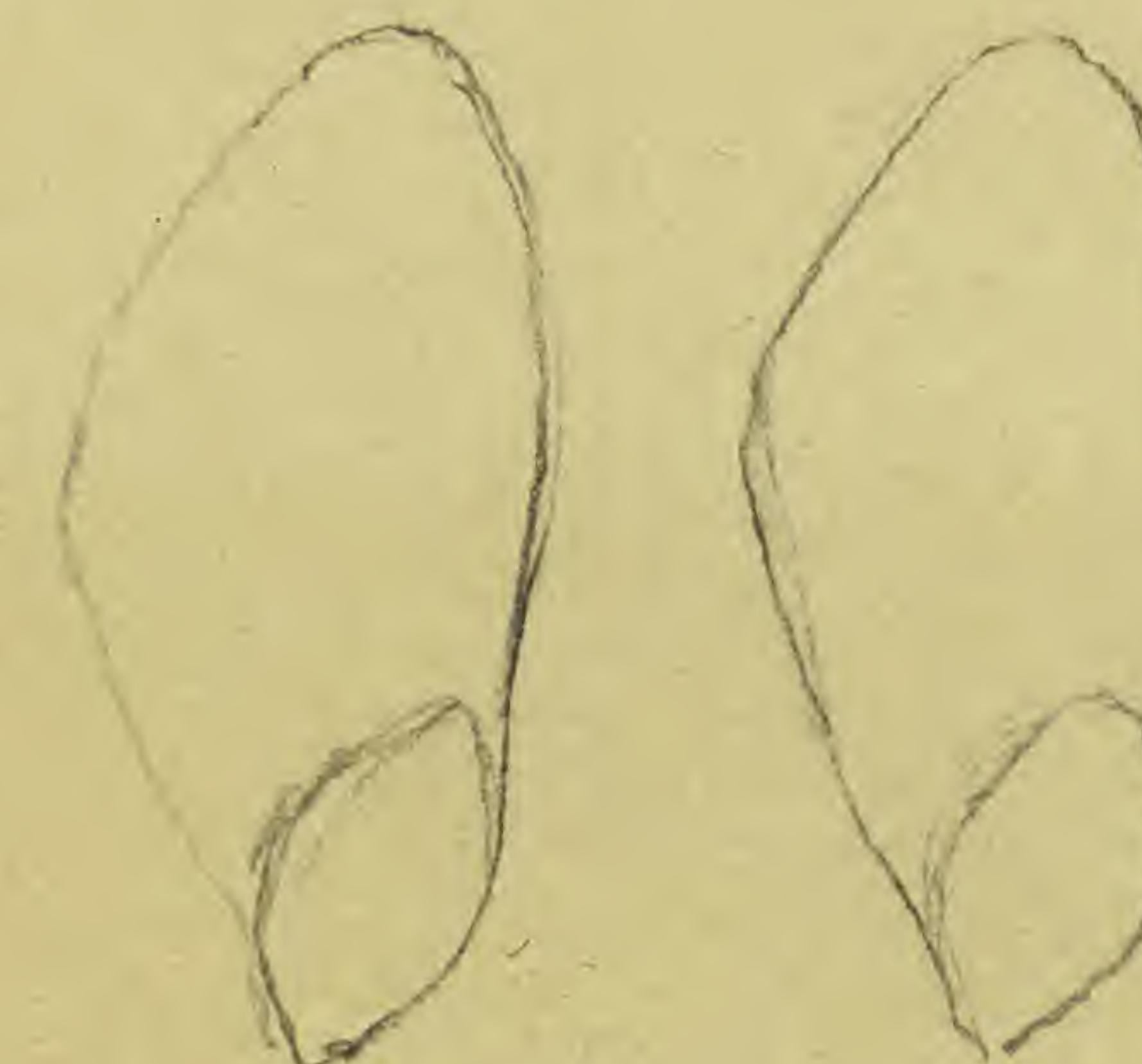
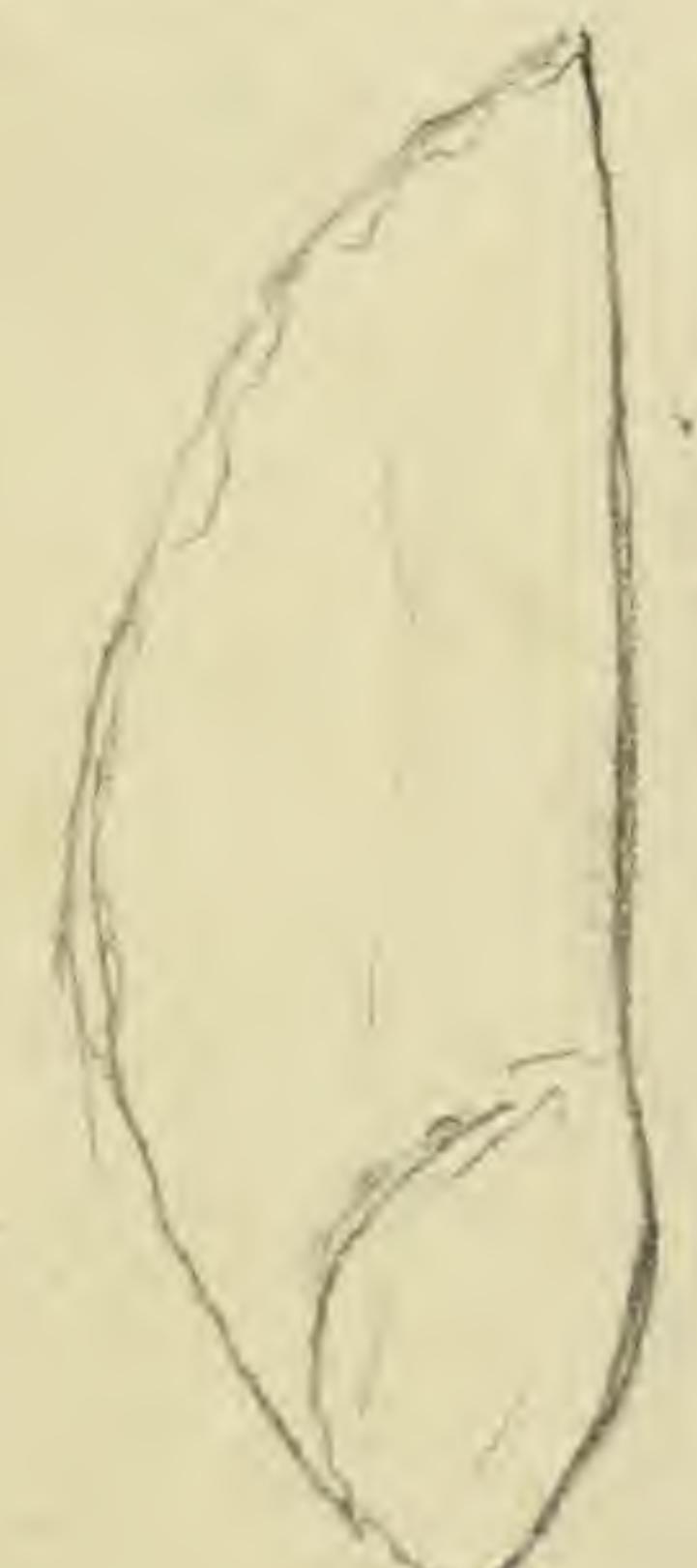
April 26 1872

seed of a Cone, sent by

Chocaberry

Herb. Berlin 646

Cone 14 inches long



8 Cotyledons  
seen in both seeds  
examined  
9 - in a 3° seed



0 1 2 3 4 5 6 7 8 9 10

cm

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GARDEN

10997

Henry T. Bohning

APOTHECARY

No. 2600 Lacled Ave., S. W. Cor. Jefferson Ave.,  
St. Louis, Mo.

No. Date,

187

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GARDEN

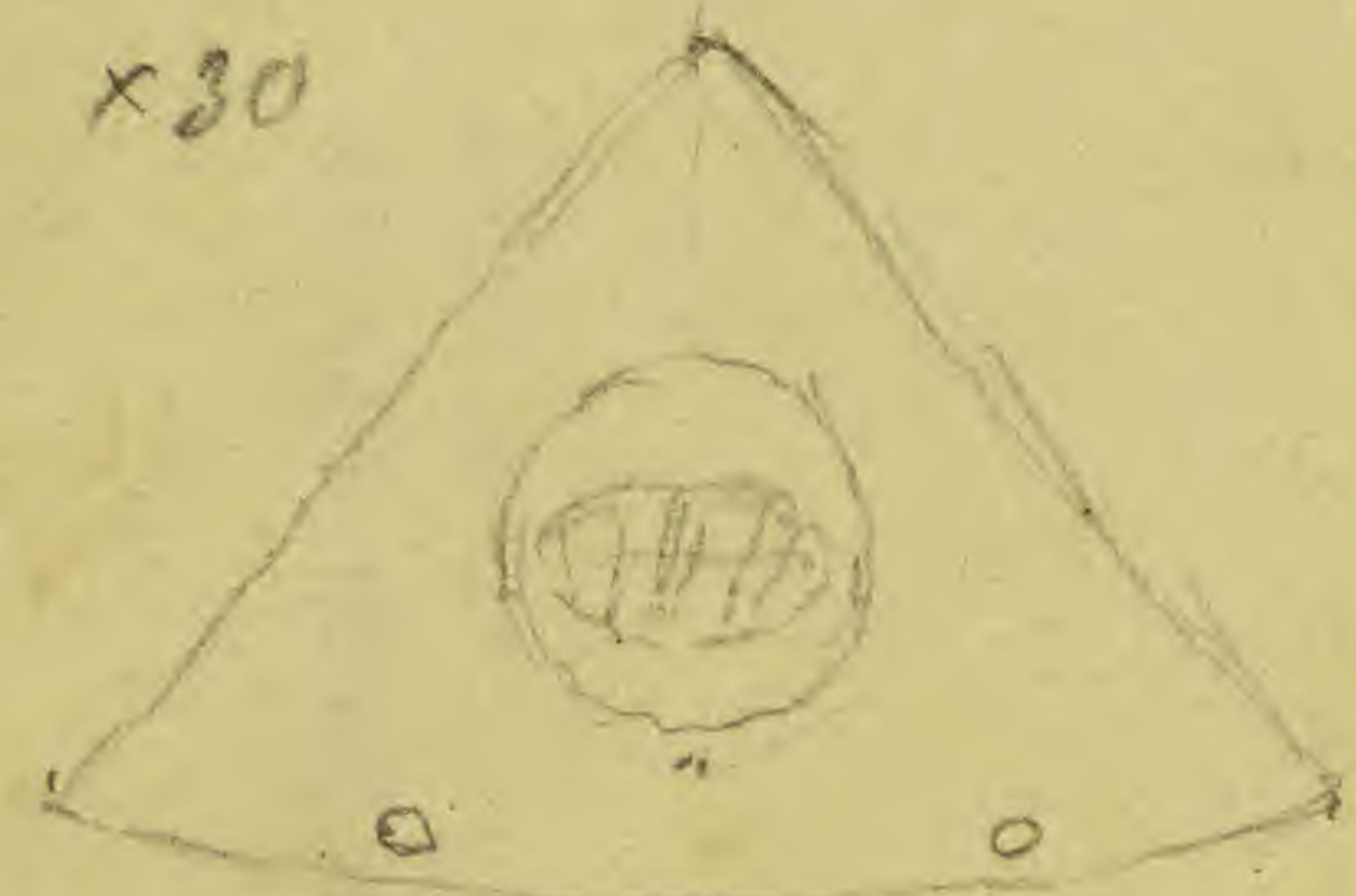
MISSOURI BOTANICAL GARDEN  
GEORGE ENGELMANN PAPERS

Geo. Engelmann, M. D.,

No. 3003 Locust Street,

$\times 60^2$

$\times 30$



*Pinus Ayacahuite*

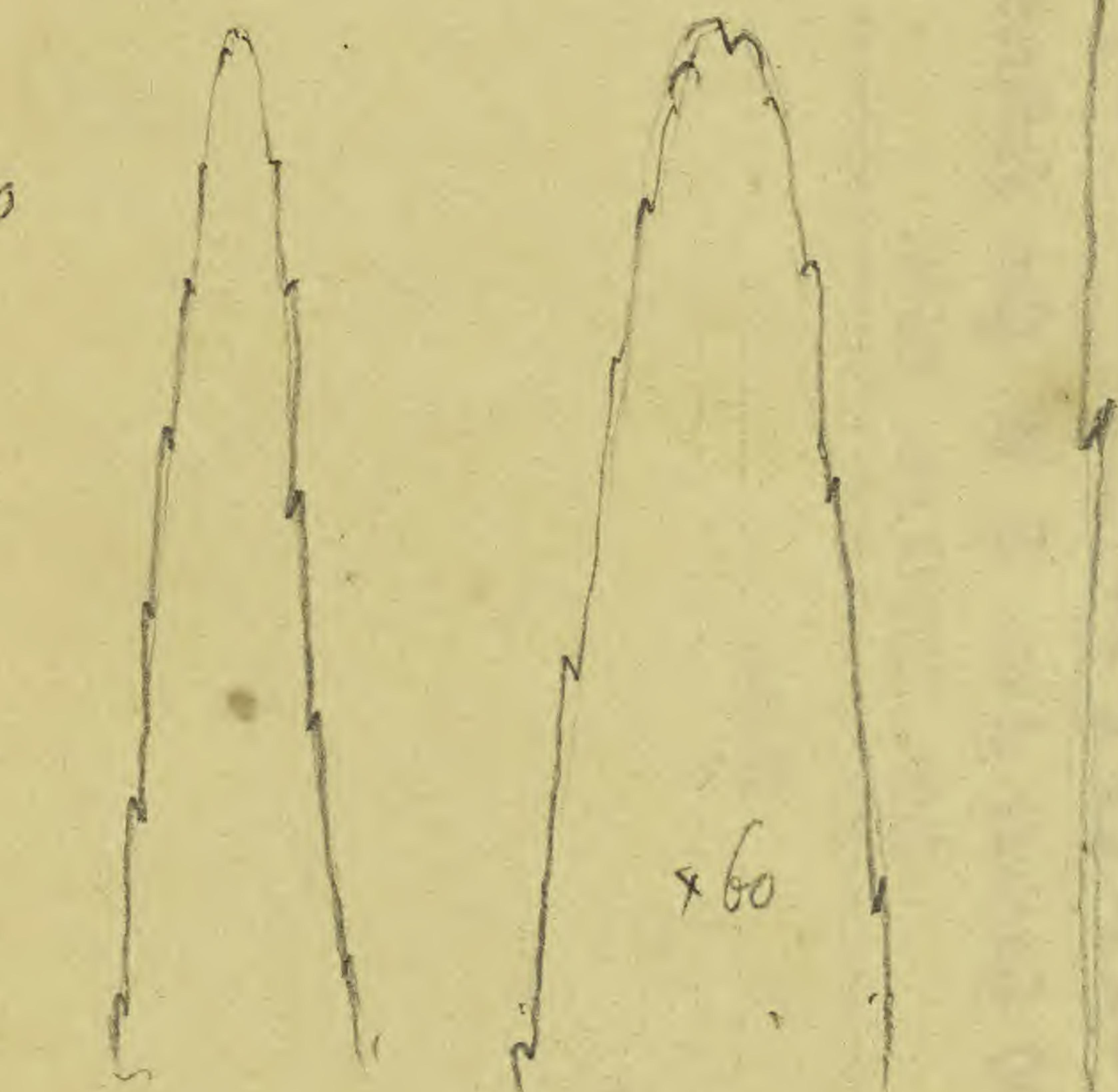
near, Chonibay 647 - H. B. Godkin

April 26 1878

Ducts sometimes almost (or entirely?)  
obliterated

Distribution of the few  
hypodermic cells similar  
to that of some of Wis's genus

$\times 30$



$\times 60$

$\times 60$

leaves 4-7 in bud



0 1 2 3 4 5 6 7 8 9 10

cm

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10998

Engelmann T. R. Rohlfing &

APOTHECARY.

No. 2600 Faedde Ave., S. W. Cor. Jefferson Ave.,  
St. Louis, Mo.

No. \_\_\_\_\_ Date, \_\_\_\_\_

187

Ap



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BOTANICAL  
GARDEN

*Geo. Engelmann, M. D.,*

No. 3003 Locust Street

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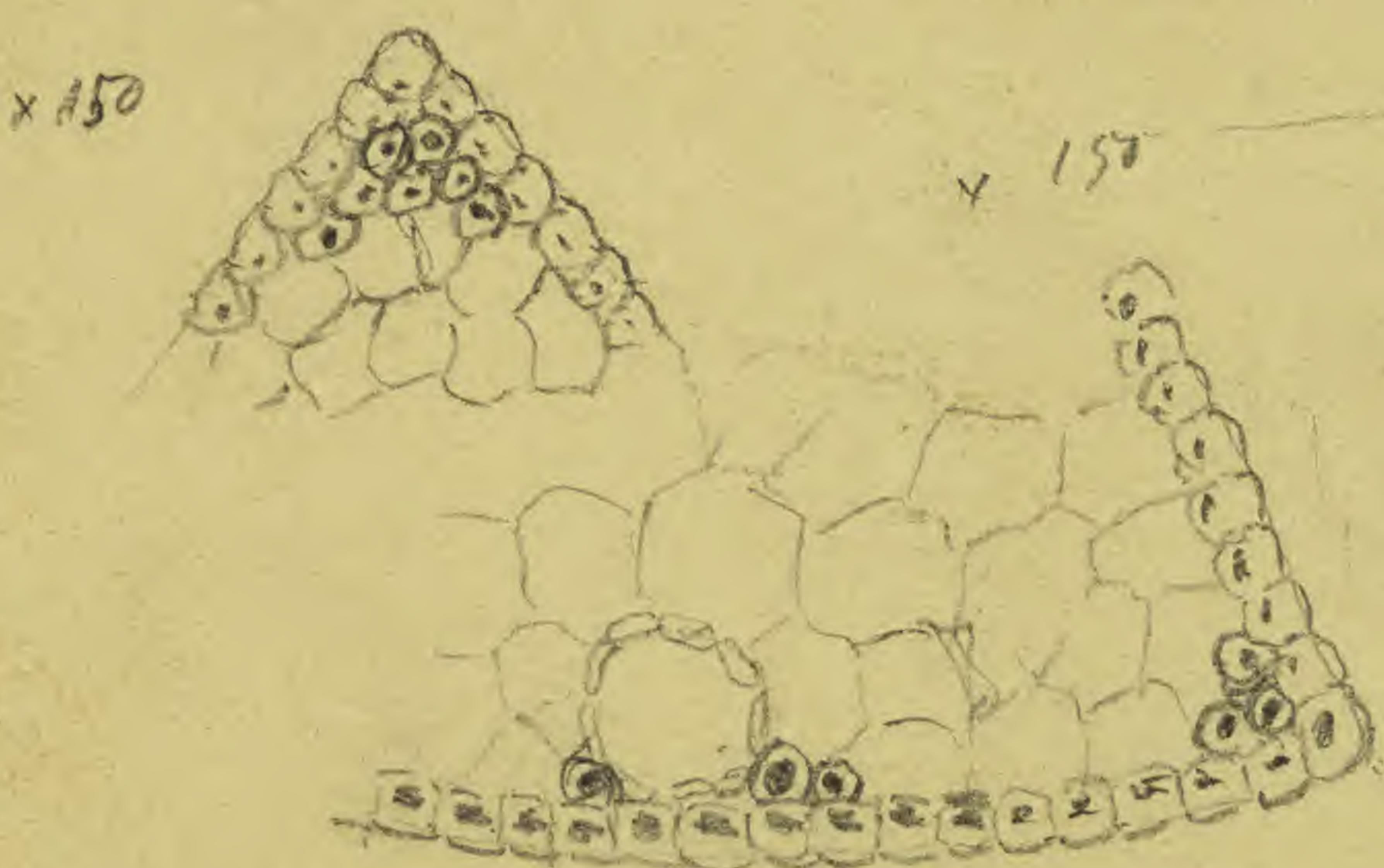
*Pinus Ayacahuite (Intertropicalis)*

April 26 1878

Dr. W. L. Jones Cos. Iquimichi 1846



surrounding hypoderm cells



x 150



x 30

x 60

teeth about 0.5 mm  
apart



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cm

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Herrmann T. Bonnifield

APOTHECARY.

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Date,

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Geo. Engelmann, M. D.,

No. 3003 Locust Street.



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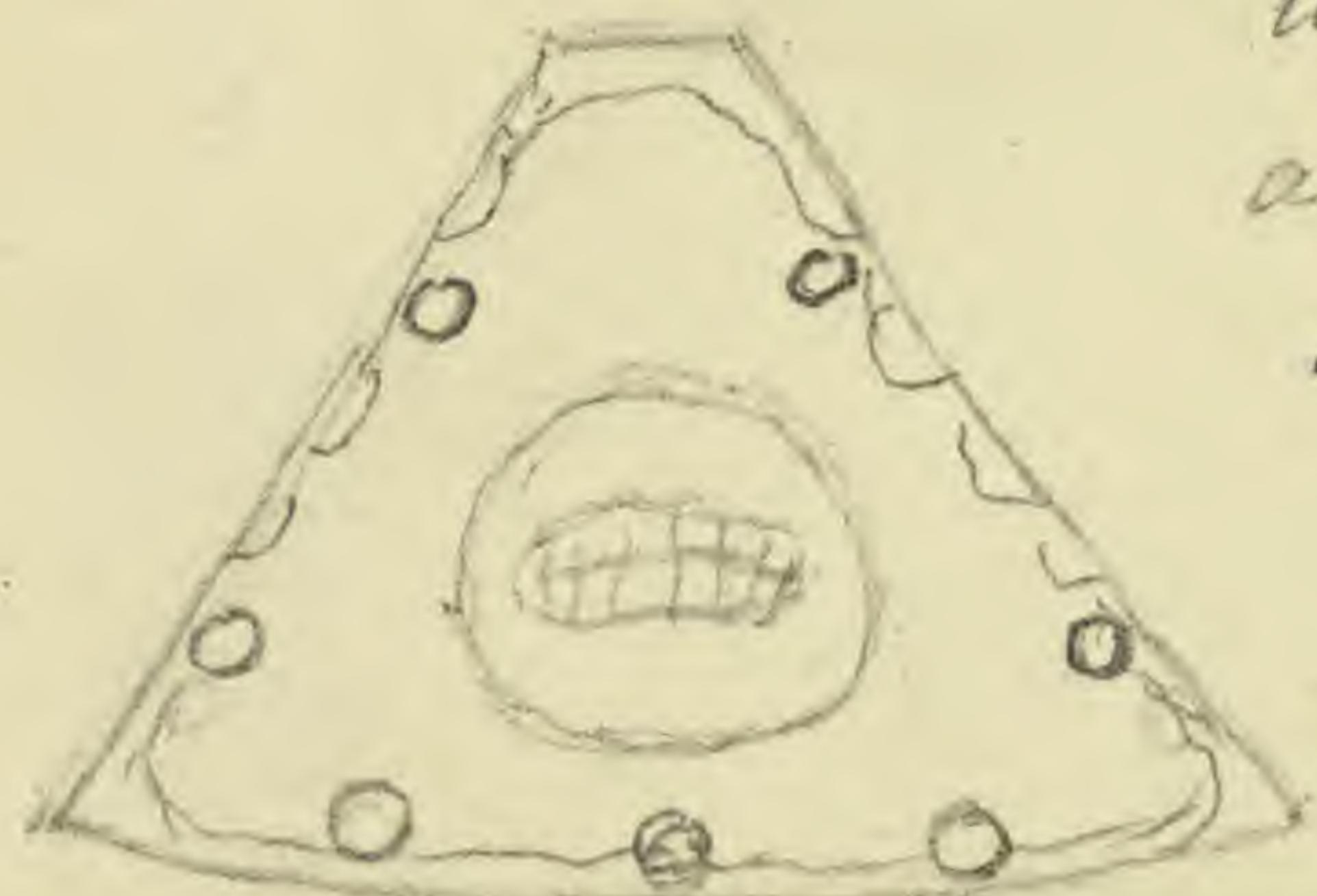
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*Pinus Don Pedrii* Broyl (Ab. Hornt) June 19 1878  
(form of *Agaveana*, fide Partebre)

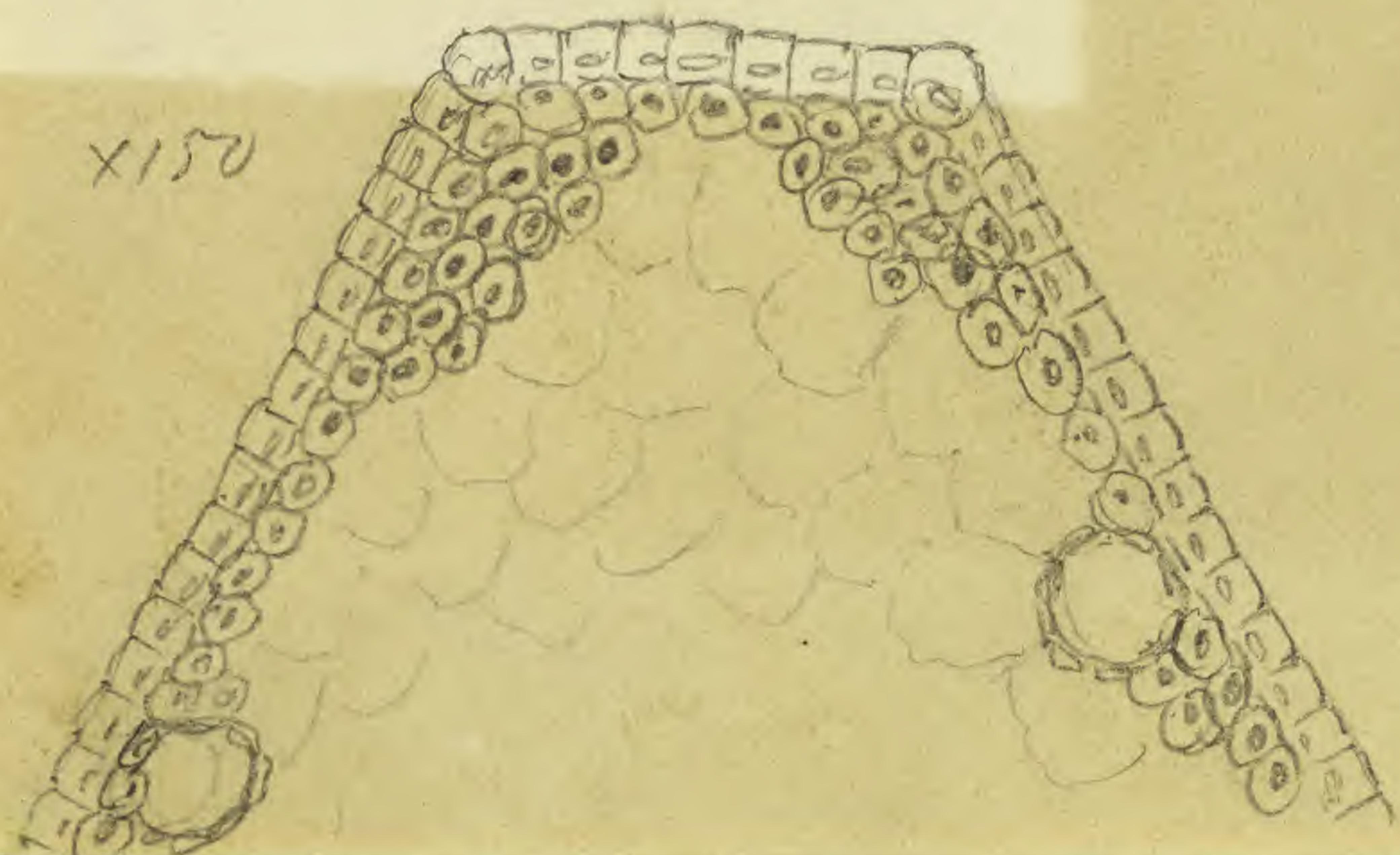
$\times 30$



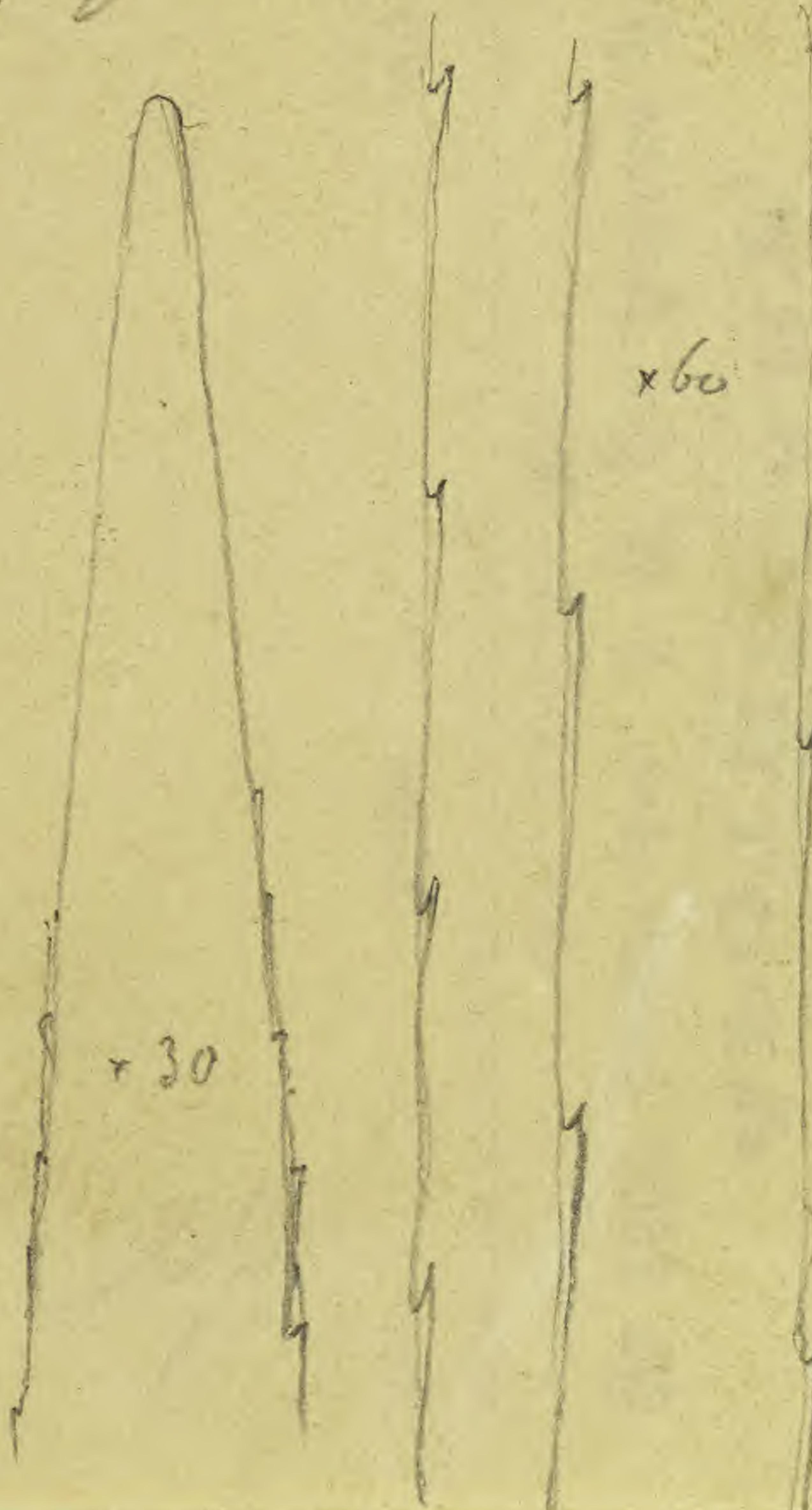
usually 3 dots on back  
and 2 on each side -  
a good deal of strong hydren,  
on the sides in bunches.

2-4 series of stomata  
on each side

$\times 150$



$\times 30$



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cm

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11000

Henry T. Roehling

APOTHECARY.

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St. Louis, Mo.

No. Date,

187

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*P. Ayahuacanite*

June 19 1878

Guatemala - H. Kew.



only trace of 2 dots,  
no hypoderm, except a little  
on corners

3 or 4 lateral series  
of stomata



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cm

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11001

Herrmann T. & Rothenfuss, 9

APOTHECARY.

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St. Louis, Mo.

No. \_\_\_\_\_ Date, \_\_\_\_\_

187

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No. 3003 Locust Street.

2 tab

8

*Pis Bonapartei*  
(& Dr Röhl)

60-1



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cm

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cm

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Pic Bonaparter Acyl (Hb Flout) June 19  
form of Hyacinthine fine Pavatone 1878

x 30



sometimes 7 dots seen  
in other instances the upper  
ones are very indistinct.

4 series of stoma  
on each side  
none on back

x30

x60



0 1 2 3 4 5 6 7 8 9 10  
cm

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11003

Herrmann T. Bonnington

APOTHECARY.

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St. Louis, Mo.

No. .... Date, .....

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Geo. Engelmann, M. D.,

No. 3003 Locust Street,



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GARDEN

12 tab

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*Pin flexilis*

62-73



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cm

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GARDEN

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*Prinus flexilis*  
Lk. Peak, Tam

Aug 1862

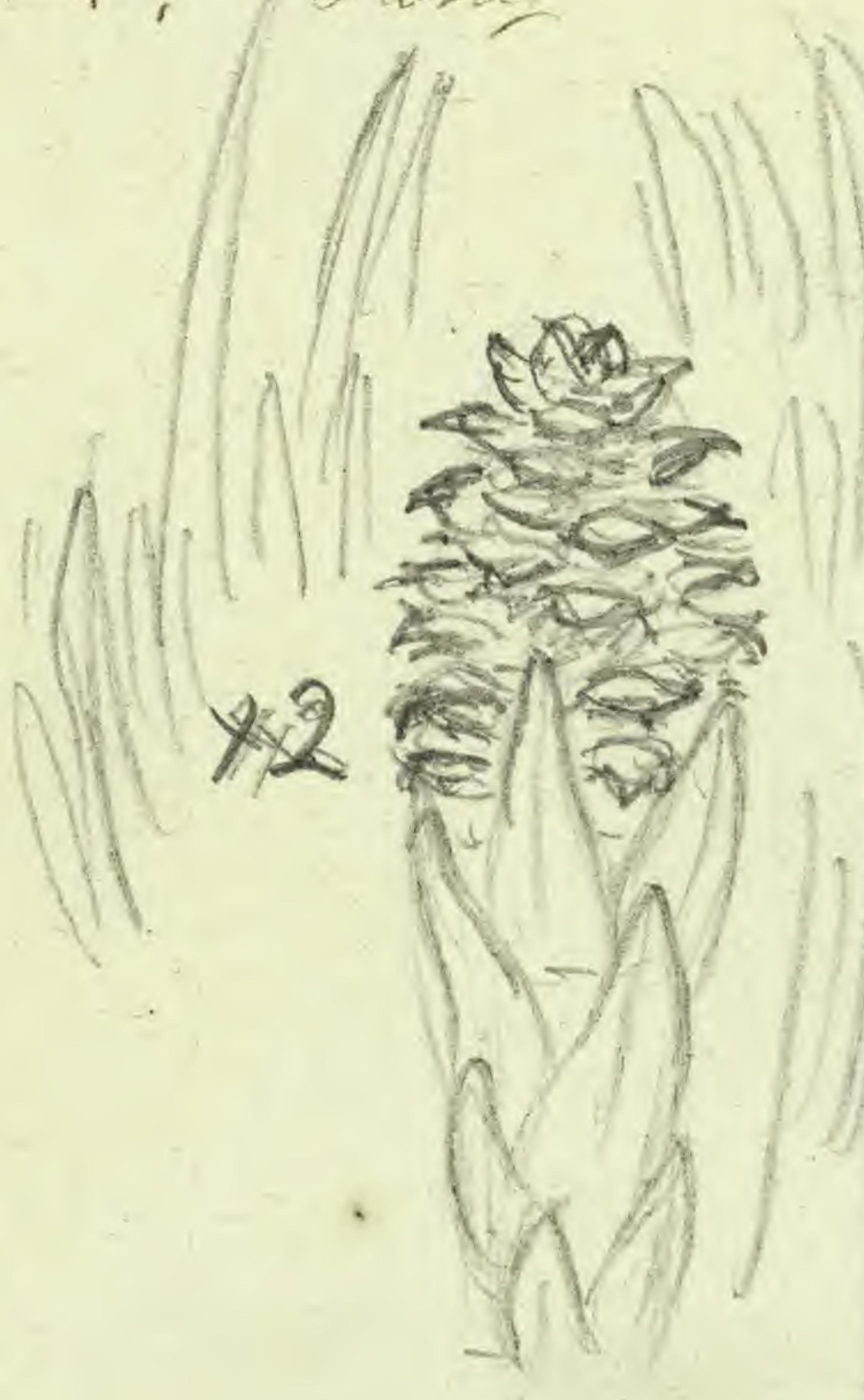
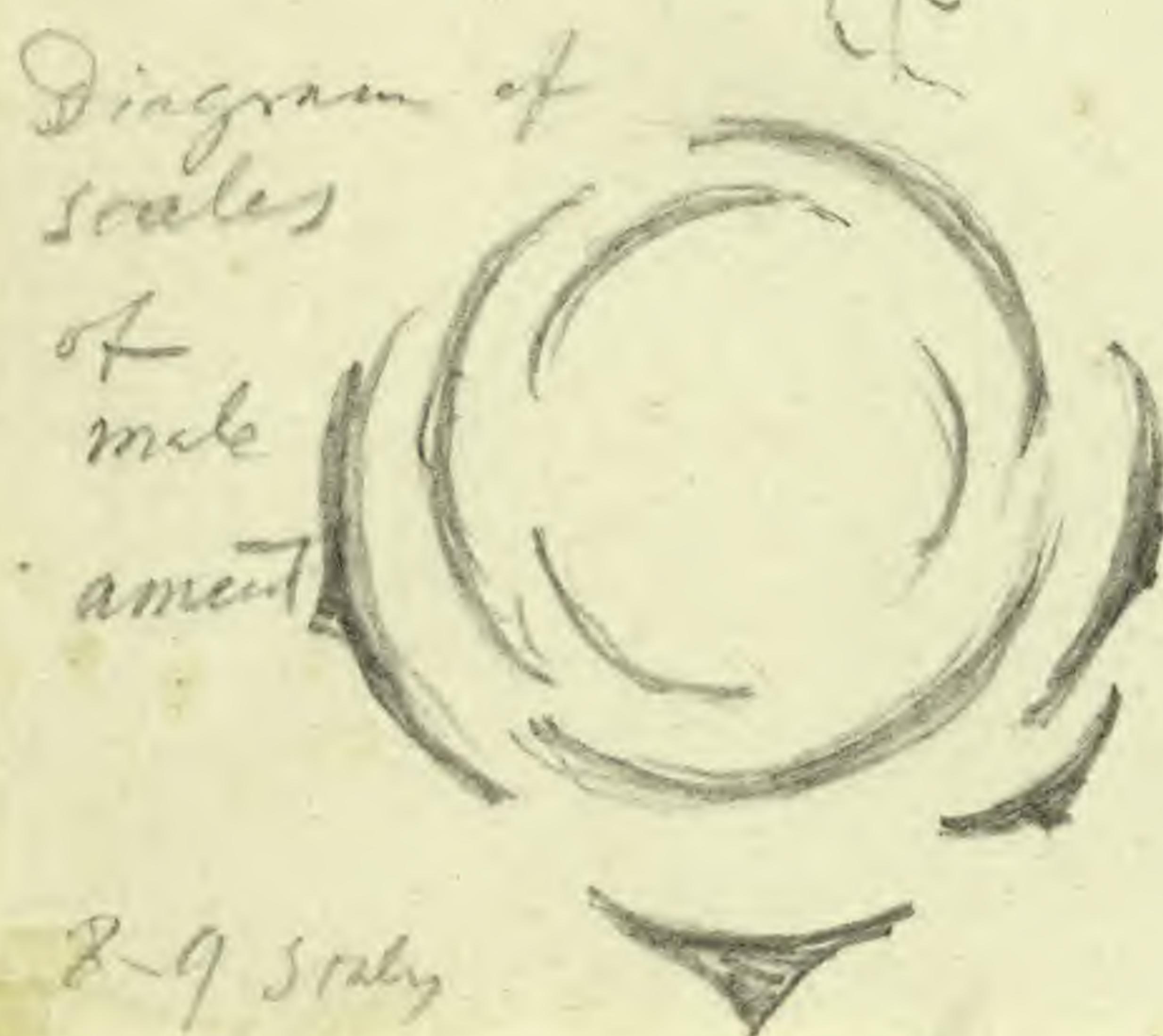
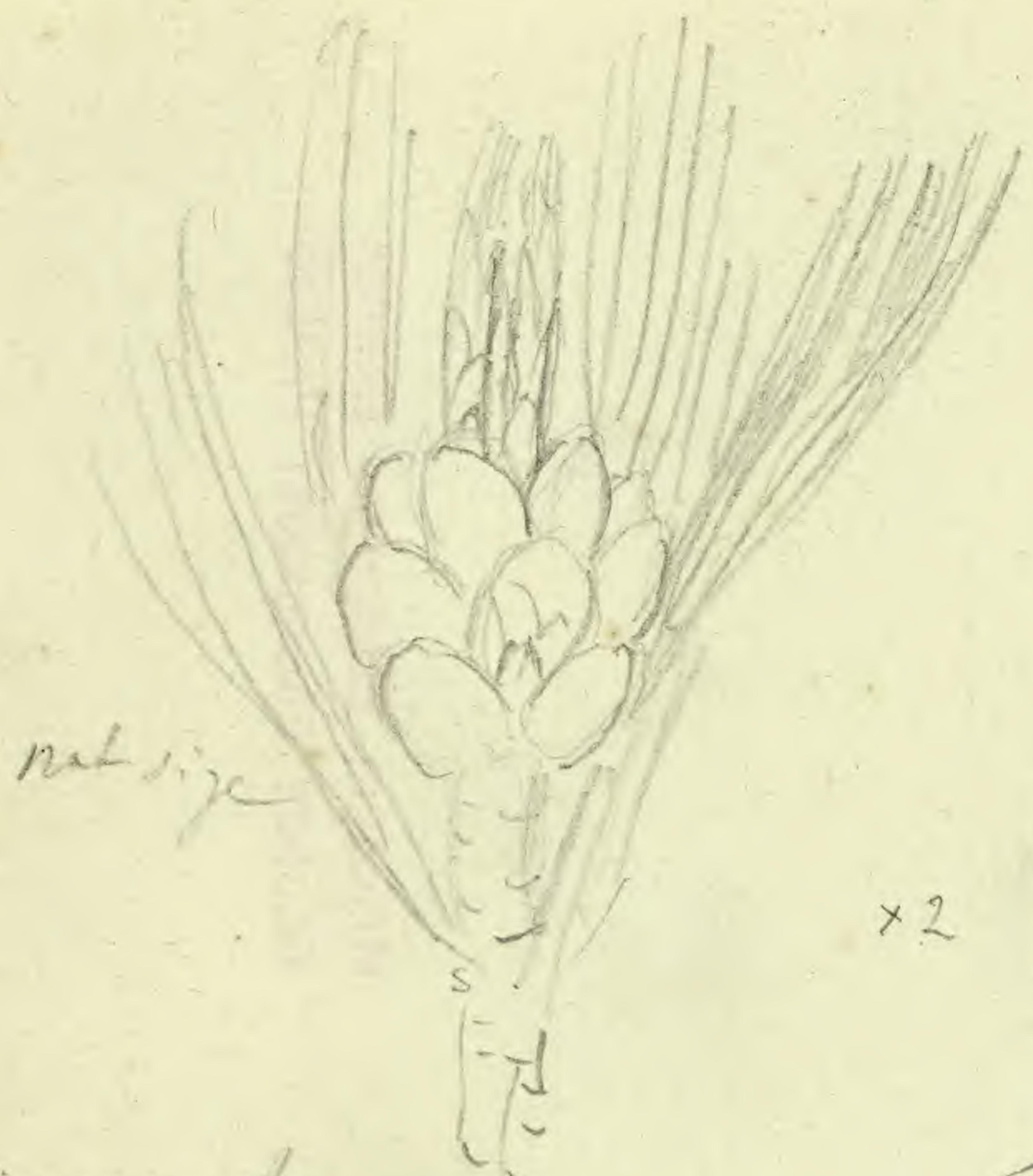


Diagram of  
scales of female  
ament  
petiolary, squamous  
even rounded.

few and short  
peduncled, pedicels  
covered with laevigata  
membranous scales,  
erect.



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MISSOURI  
BOTANICAL  
GARDEN

11005

JONES & LEITCH,  
DRUGGISTS,  
and Market Streets, St. Louis, Mo.  
Corner Fifth and

MISSOURI BOTANICAL GARDEN  
GEORGE ENGELMANN PAPERS



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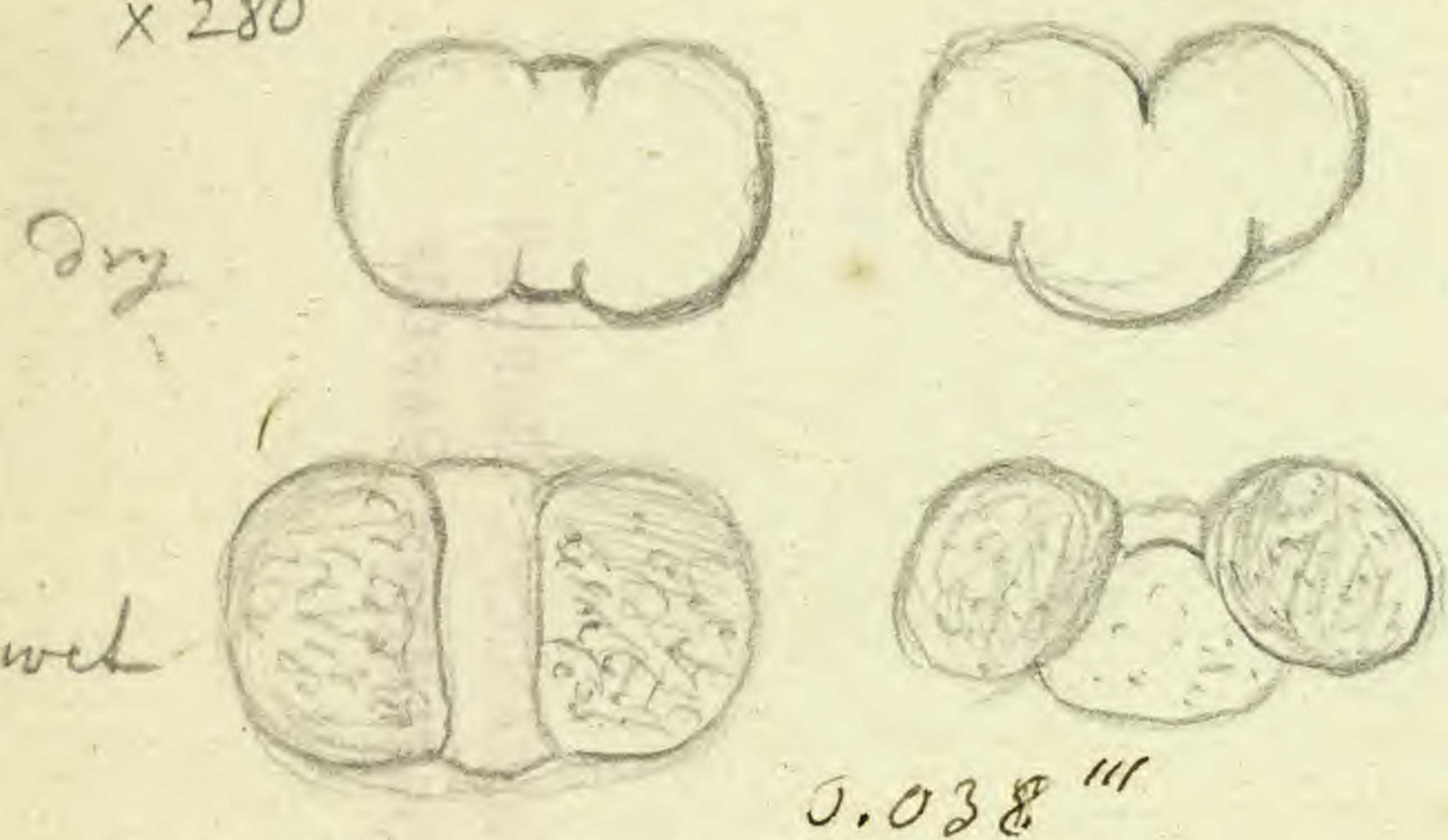
cm

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x 280

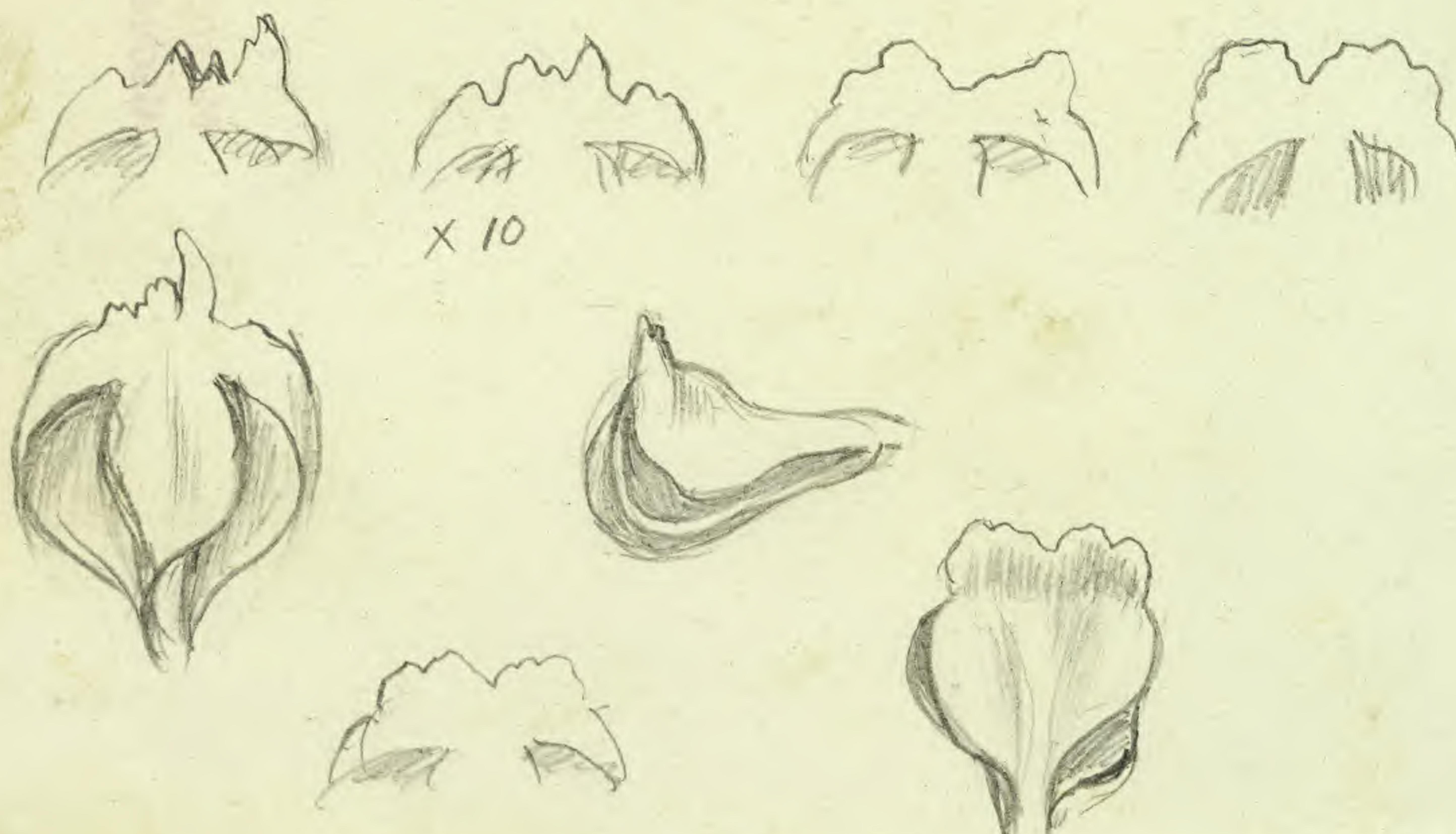


*Pinus flexilis*

Aug 1862

River Park, St. Paul

PIKES PEAK WILD CHERRIES  
W. W. WILSON, DRAWN



0 1 2 3 4 5 6 7 8 9 10  
cm

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BOTANICAL  
GARDEN

11006

ARTHUR LEITCH,  
APOTHECARY AND CHEMIST,

Sixth and Market streets, St. Louis, Mo.

280 / 1060      280  
84      1038  
220      1960  
84      1036  
1036

224  
284  
1064

MISSOURI BOTANICAL GARDEN  
GEORGE ENGELMANN PAPERS



0  
cm

1 2 3 4 5 6 7 8 9 10

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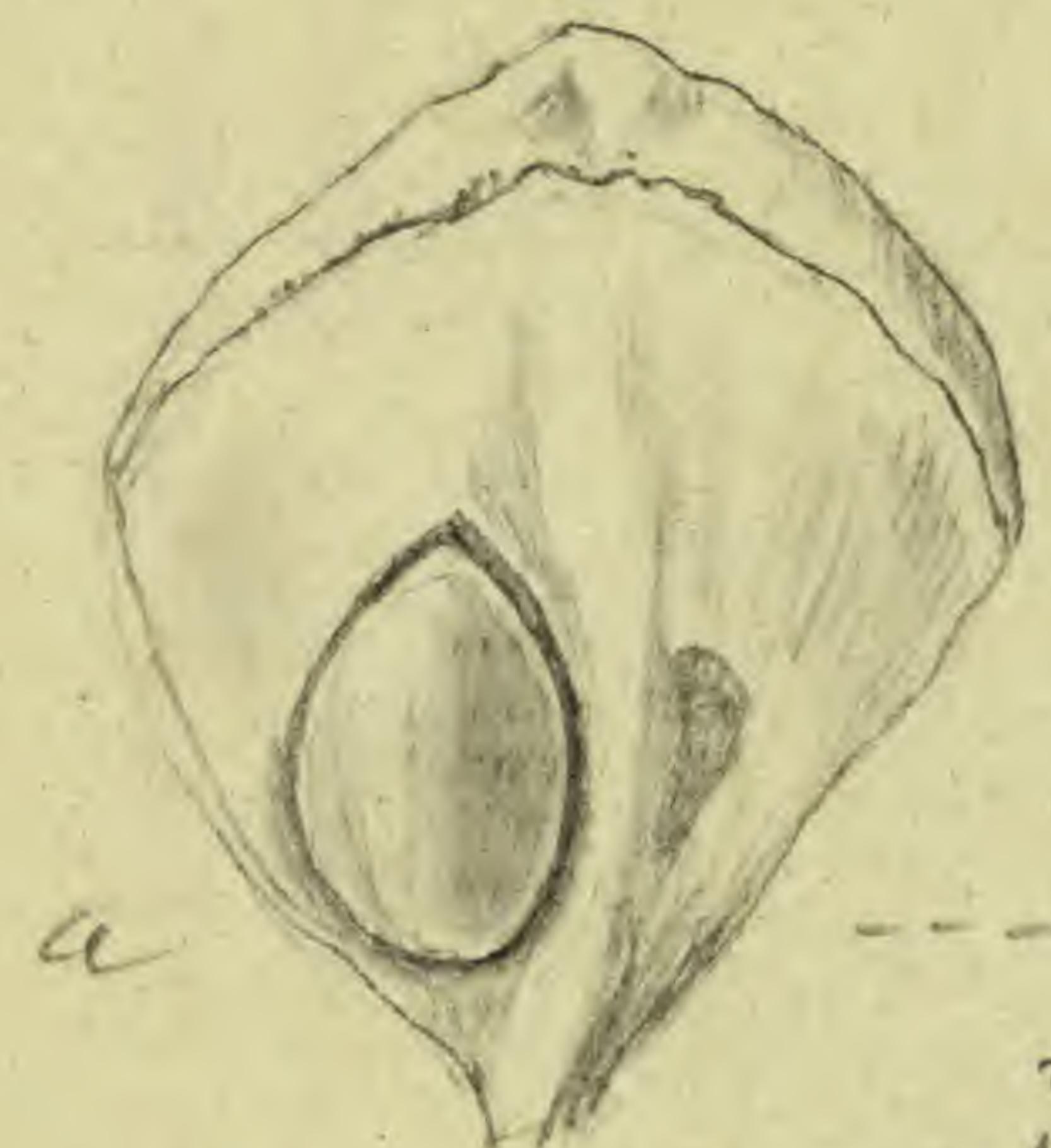


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*Pinus flexilis*

Aug 1862

Pike Peak, Perry



views of seed  
towards | towards  
the middle | the edge  
of scale

a upper surface

b side of seed towards the scale

seed pointed upwards, sharp edges  
running down on inner side,  
representing wing, outer side  
of seed more rounded, (winglike)  
carina <sup>not</sup> running down



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cm

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MISSOURI  
BOTANICAL  
GARDEN

11007

M. W. ALEXANDER,

SOUTH-EAST CORNER OF FOURTH AND MARKET STREETS,  
ST. LOUIS.

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GEORGE ENGELMANN PAPERS



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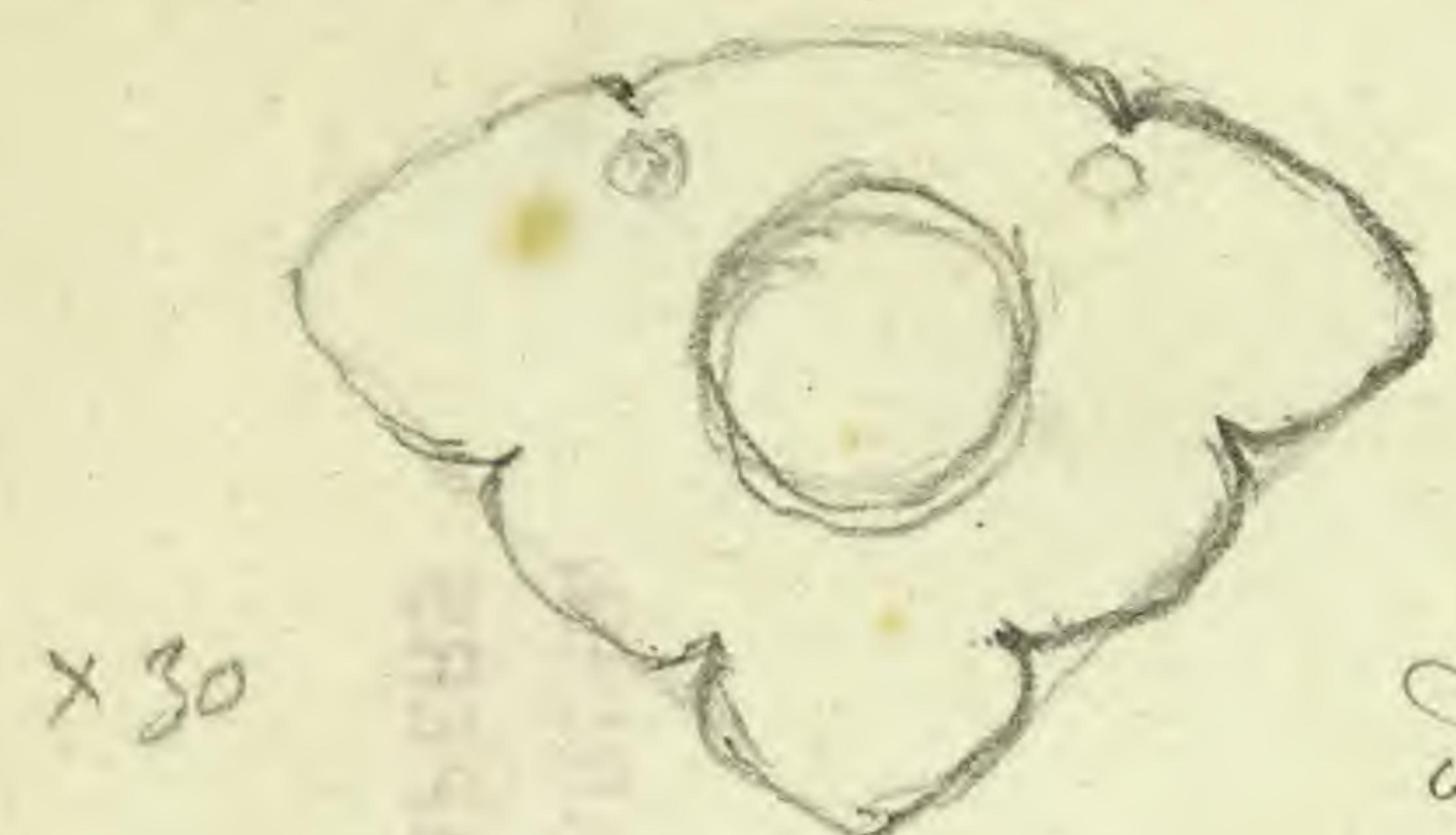
cm

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GARDEN

*Pinus flexilis*



$\times 30$



dry



soaked



fresh!  
8 P.M.  
July 1862

July 1862  
Aug -

support sole long  
acuminate point  
soon breaks off  
x 2 undimmed long  
peristome at  
cilia division  
soles 8 or 9  
diagram of leaves  
& soles



$\times 2$

young stem subulate  $\times 2$   
& even a little calyx  
soles soon divided



0 1 2 3 4 5 6 7 8 9 10  
cm

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BOTANICAL  
GARDEN

11008

ARTHUR LEITCH,  
APOTHECARY AND CHEMIST,

Sixth and Market streets, St. Louis, Mo.

MISSOURI BOTANICAL GARDEN  
GEORGE ENGELMANN PAPERS



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cm

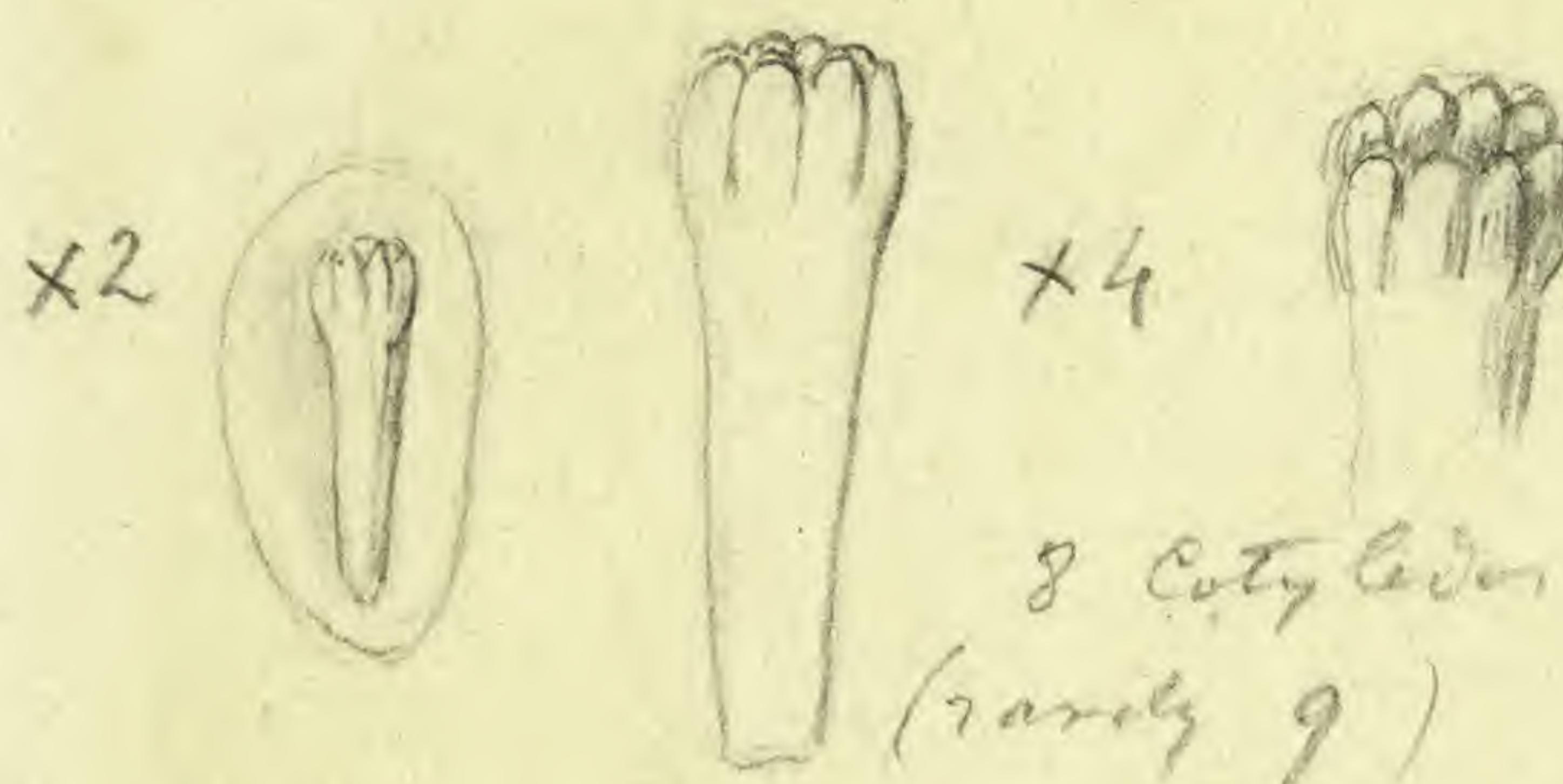
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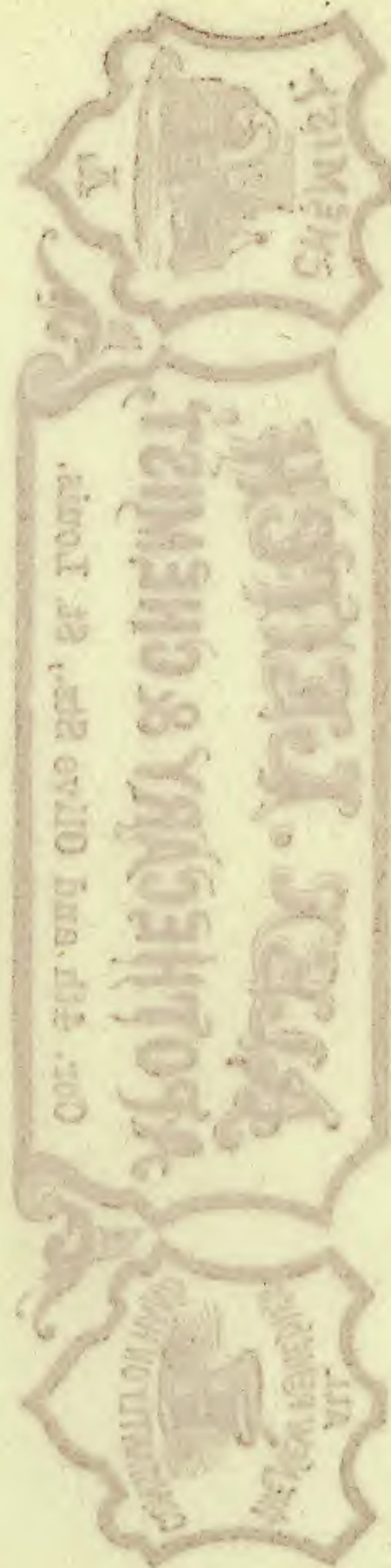
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*Pinus flexilis*  
Pikes Peak 1862

Dec 1862



root  
thick, corky



OUR FINE COLLECTION OF CHINESE PLANTS



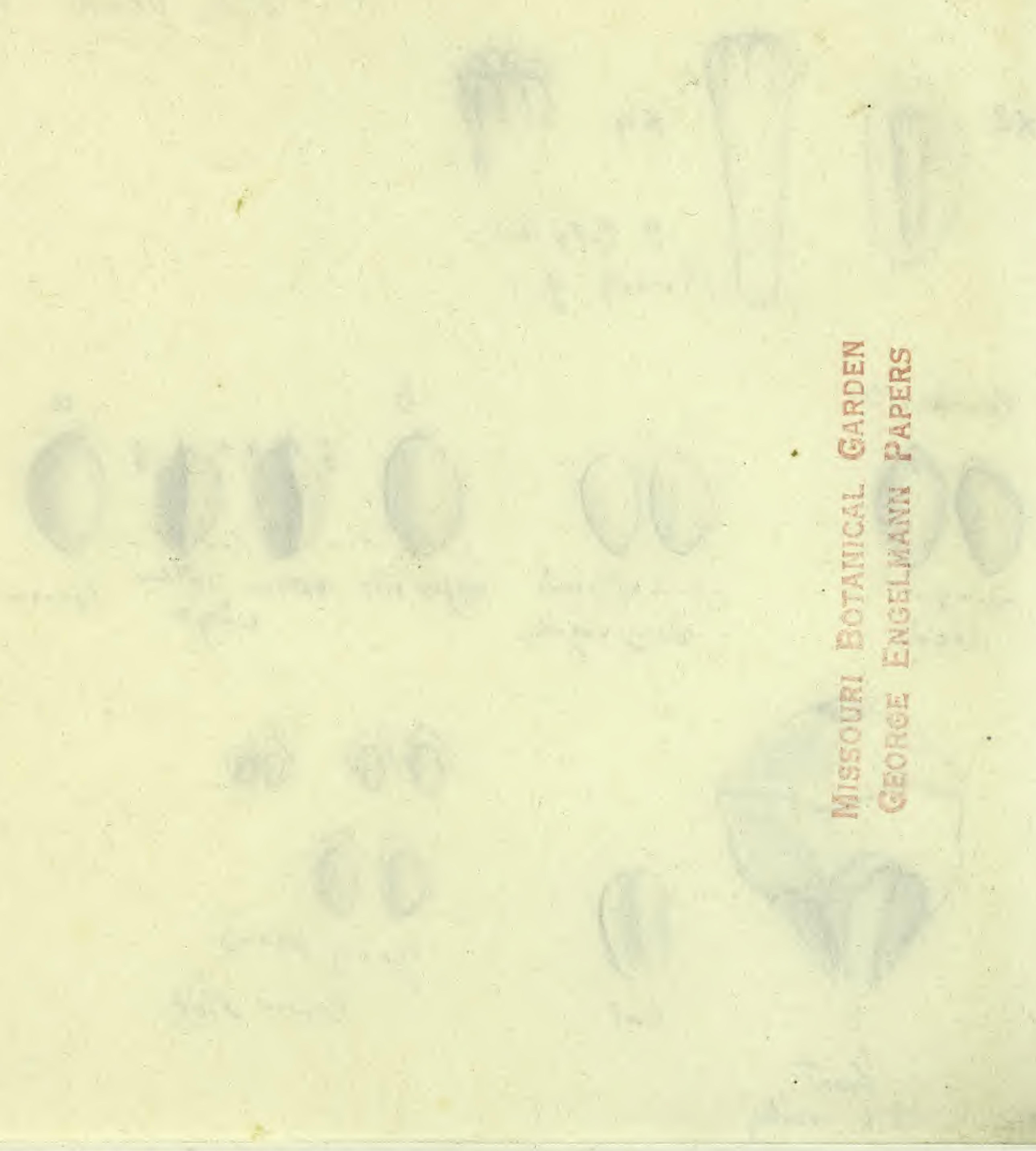
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11009



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GARDEN

*Pinus flexilis*

Aug 1863

Parry 1862

Soaked Pollen

0.045



0.042



0.040



X415.

Size of Pollen

0.039 - 0.045

<sup>0.042</sup> mean



0 1 2 3 4 5 6 7 8 9 10

cm

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11010

PLATES  
SETS.

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cm

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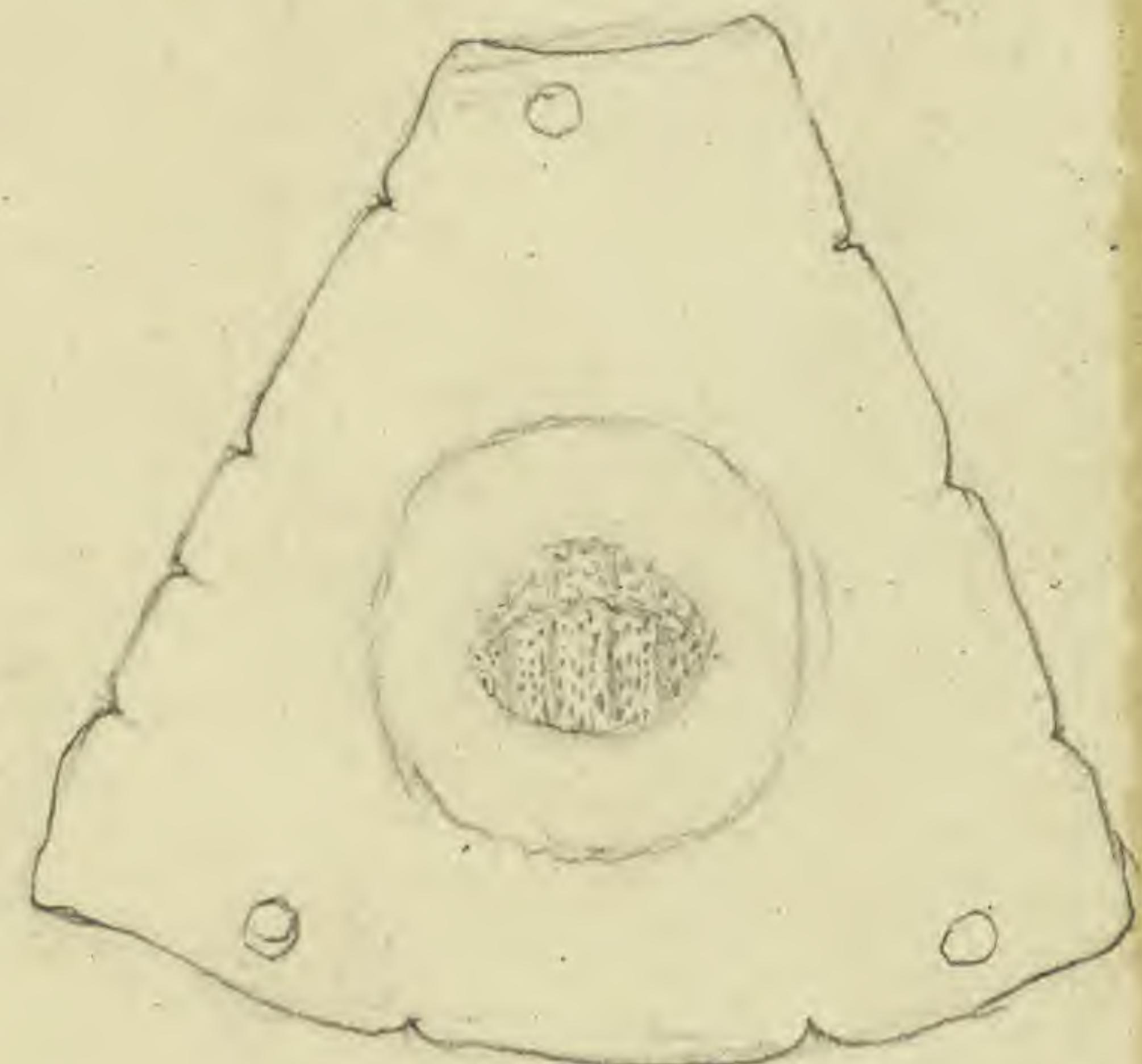
*Pinus flexilis*

March 29 1871

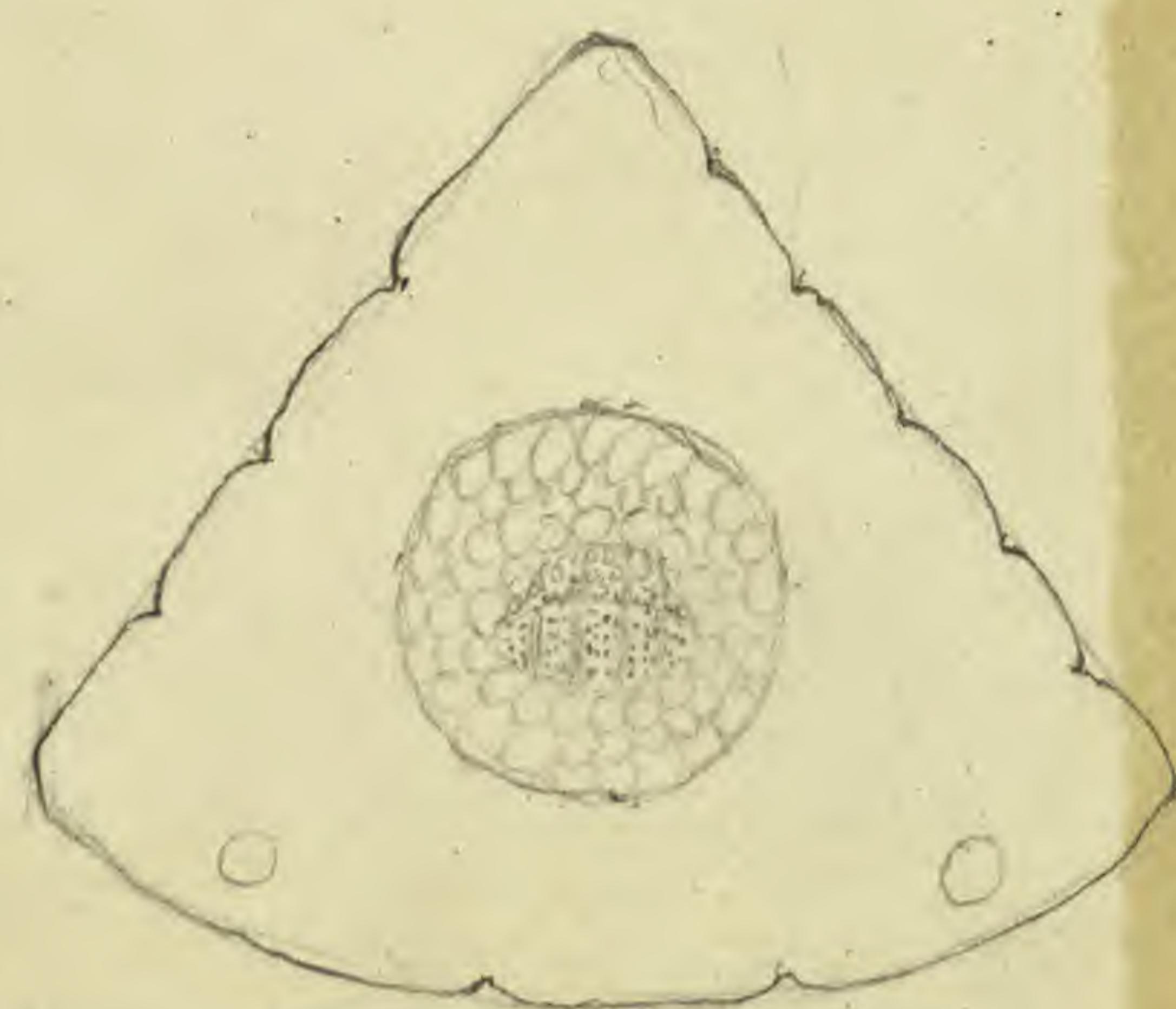
Montane

R. Schawff Feb 1871

fresh  
leaves, sections x30



x 30



0 1 2 3 4 5 6 7 8 9 10

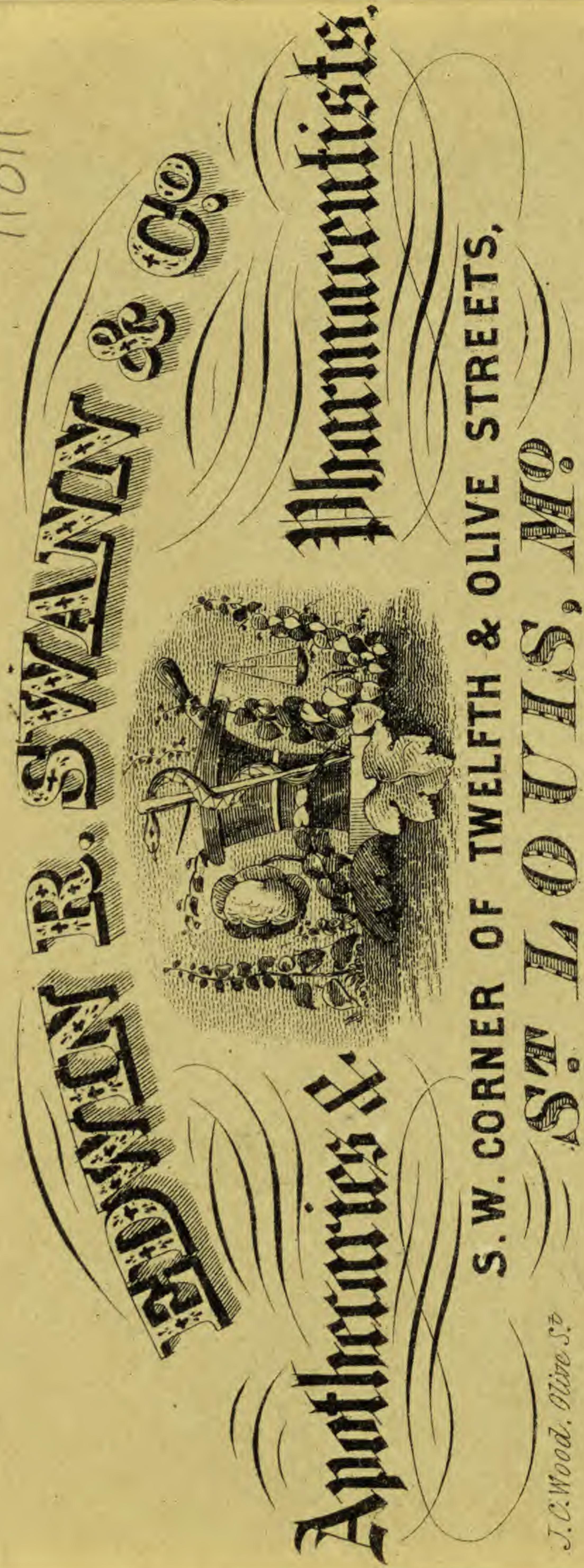
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*Pinus flexilis*

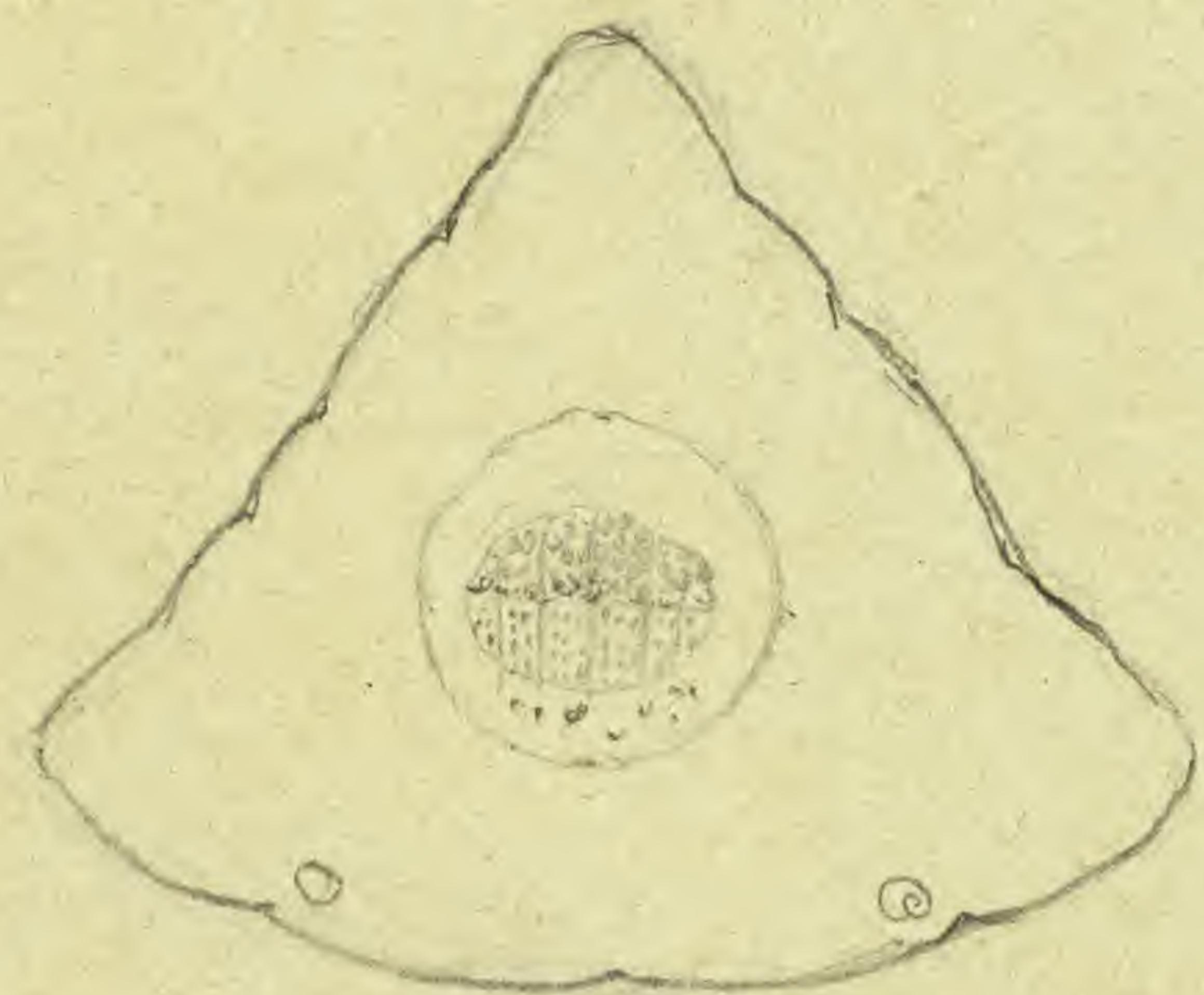
April 1, 1871.

$\times 30$

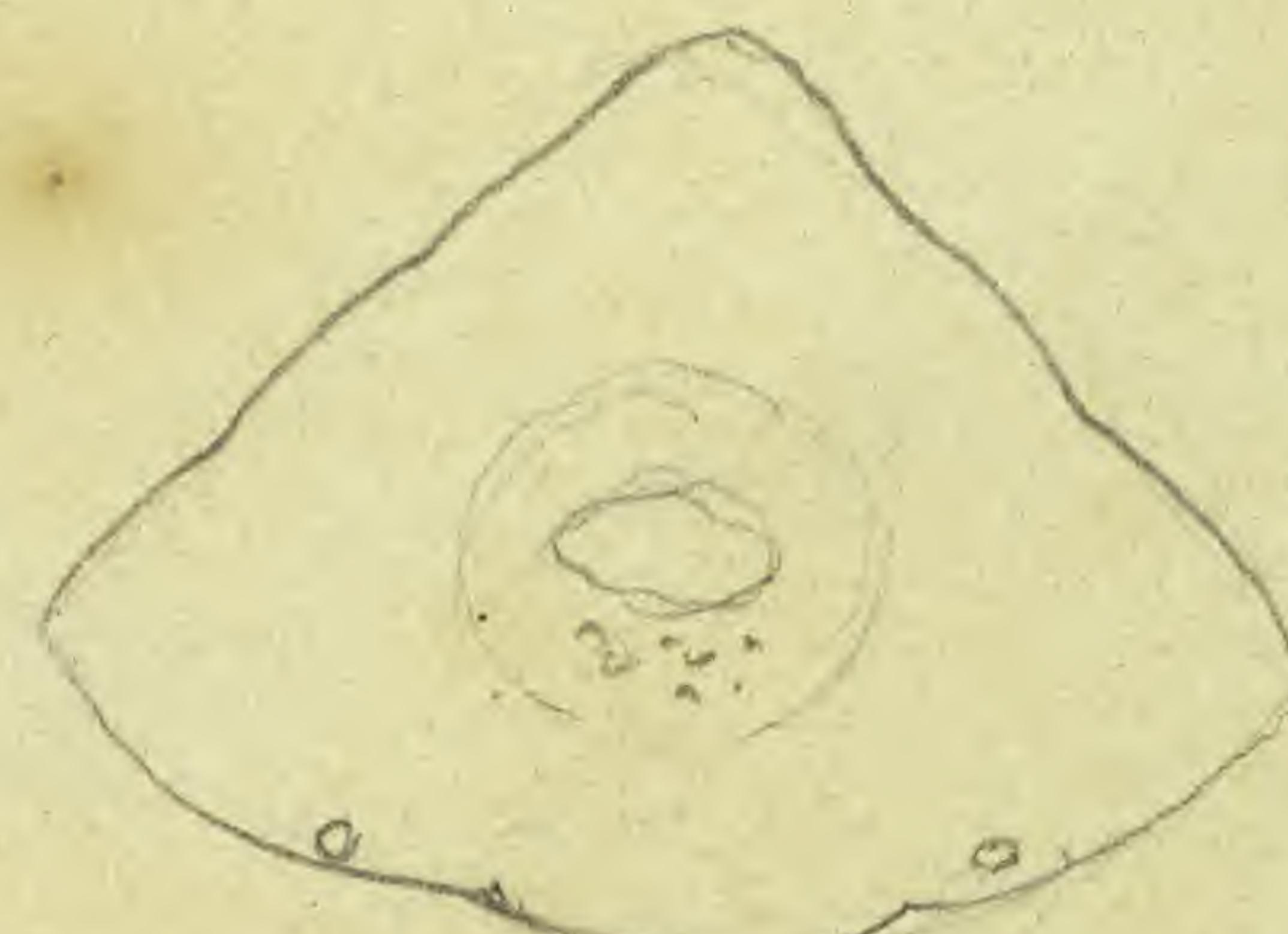
San Francisco Mountain

D. Palmer

leaves  $2\frac{1}{2}$  - 3 inches long  
or even more



$\times 30$



20 Jun 1878

Smallest leaves,  
without or with  
single interrupted  
series of stomata  
hypodermis with thick



0 1 2 3 4 5 6 7 8 9 10

cm

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MISSOURI  
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11012

Leitch & Collies

Driving & Carting

West Fifth Corner and Market Streets

South

MISSOURI BOTANICAL GARDEN  
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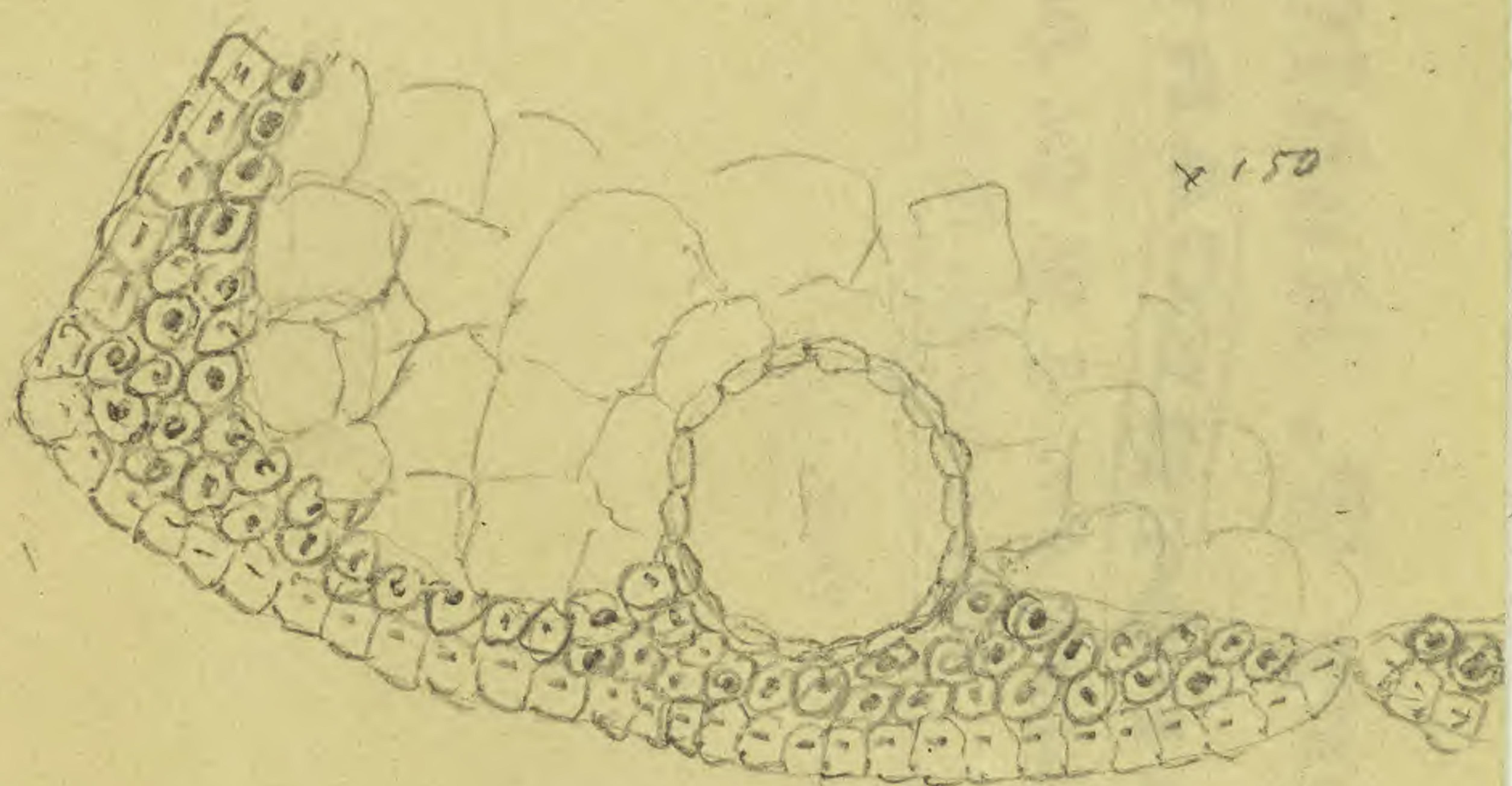
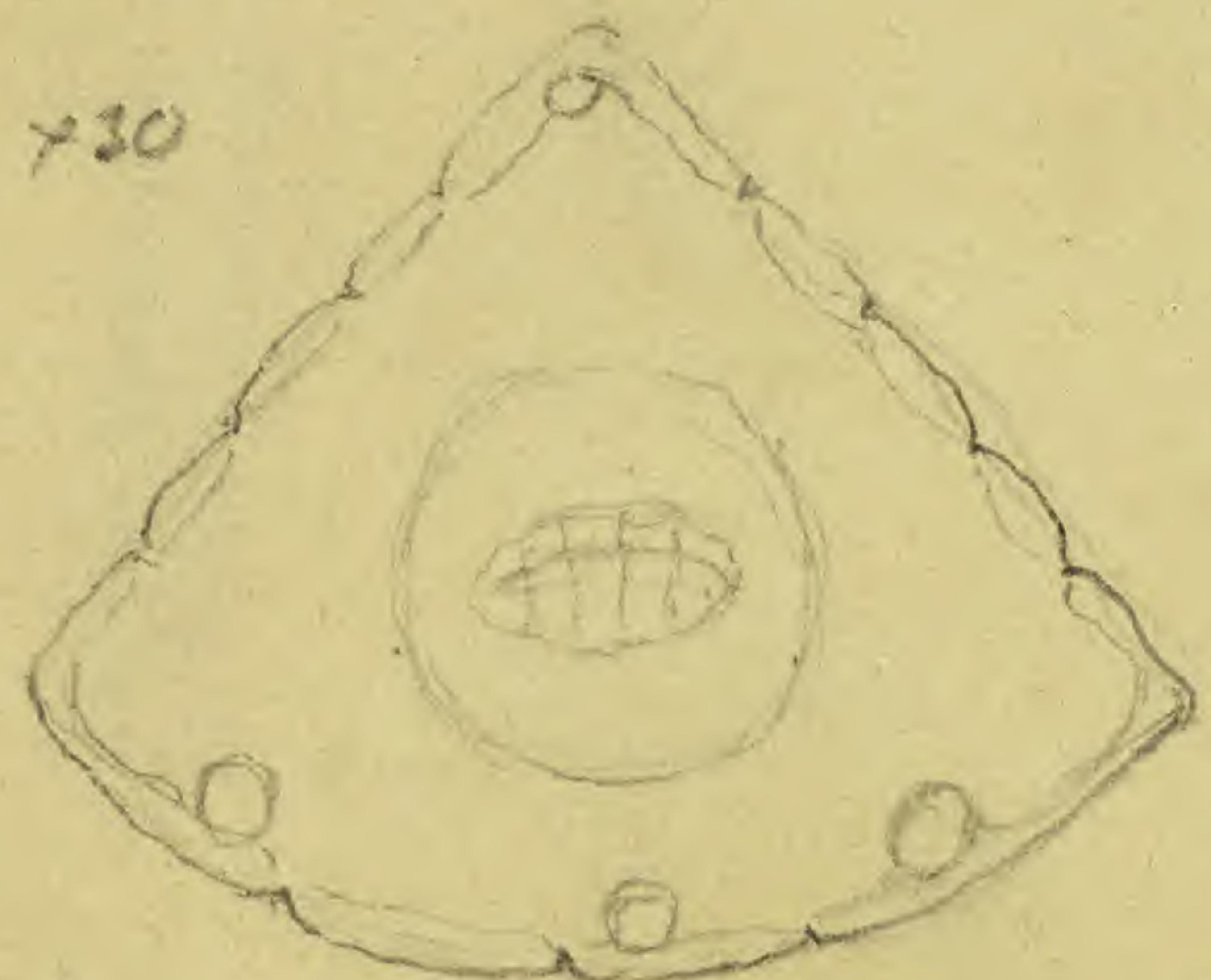
MISSOURI  
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April 26 1878

*P. flexilis*

Sierra River, Calif. Nothnck 266 1875

comes of the ordinary form



hypoderm cells all around,  
but none around the  
ducts. 2 primary dorsal  
a thin smaller dorsal under  
and one carinal duct.



0 1 2 3 4 5 6 7 8 9 10

cm

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11013

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ST. LOUIS, MO.

No. \_\_\_\_\_ Date, \_\_\_\_\_

187

J. J.



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No. 3003 Locust Street,

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GEORGE ENGELMANN PAPERS

*Pin. flexilis*

June 20 1878

Hayden, Goodwater Fork 1860



leaves of same bundle

1-3 series of stomata on back  
2 on sides



0 1 2 3 4 5 6 7 8 9 10

cm

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11014

HENRY T. BOHANNON

APOTHECARY.

No. 2600 Laclede Ave., S. W. Cor. Jefferson Ave.,  
ST. LOUIS, MO.

No. \_\_\_\_\_ Date, \_\_\_\_\_

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Ap



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No. 3003 Locust Street

*Pinus flexilis*

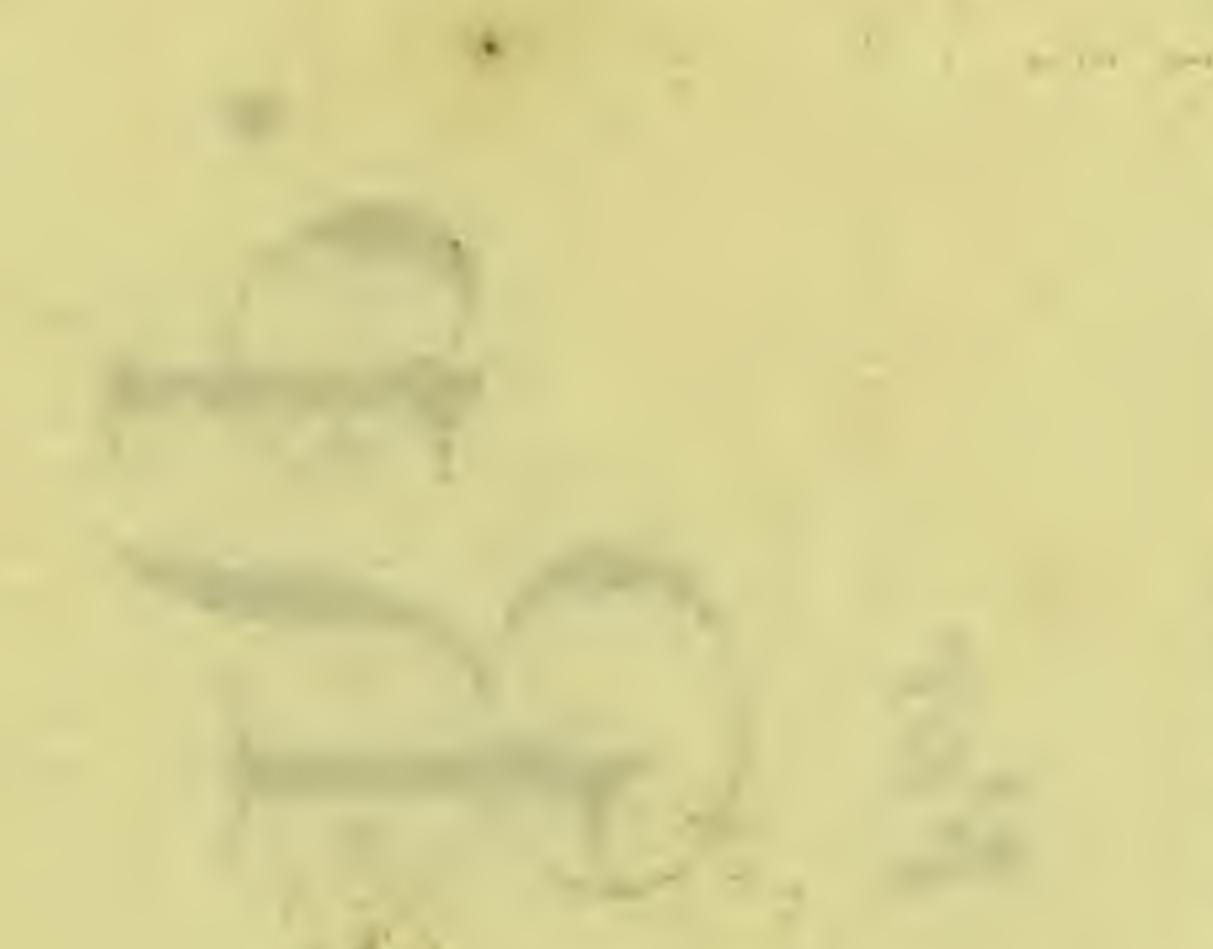
California Aug 1877

Sept 16 1877



6-7 Cotyled.

$\frac{8}{21}$  order



0 1 2 3 4 5 6 7 8 9 10

cm

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11015

Drentzschner Apotheker.

EGE TO. UDE,



No. 3610 North 10th Street,  
Between Mallinckrodt and Salisbury,  
ST. LOUIS, MO.

No.

For

R.P.

187



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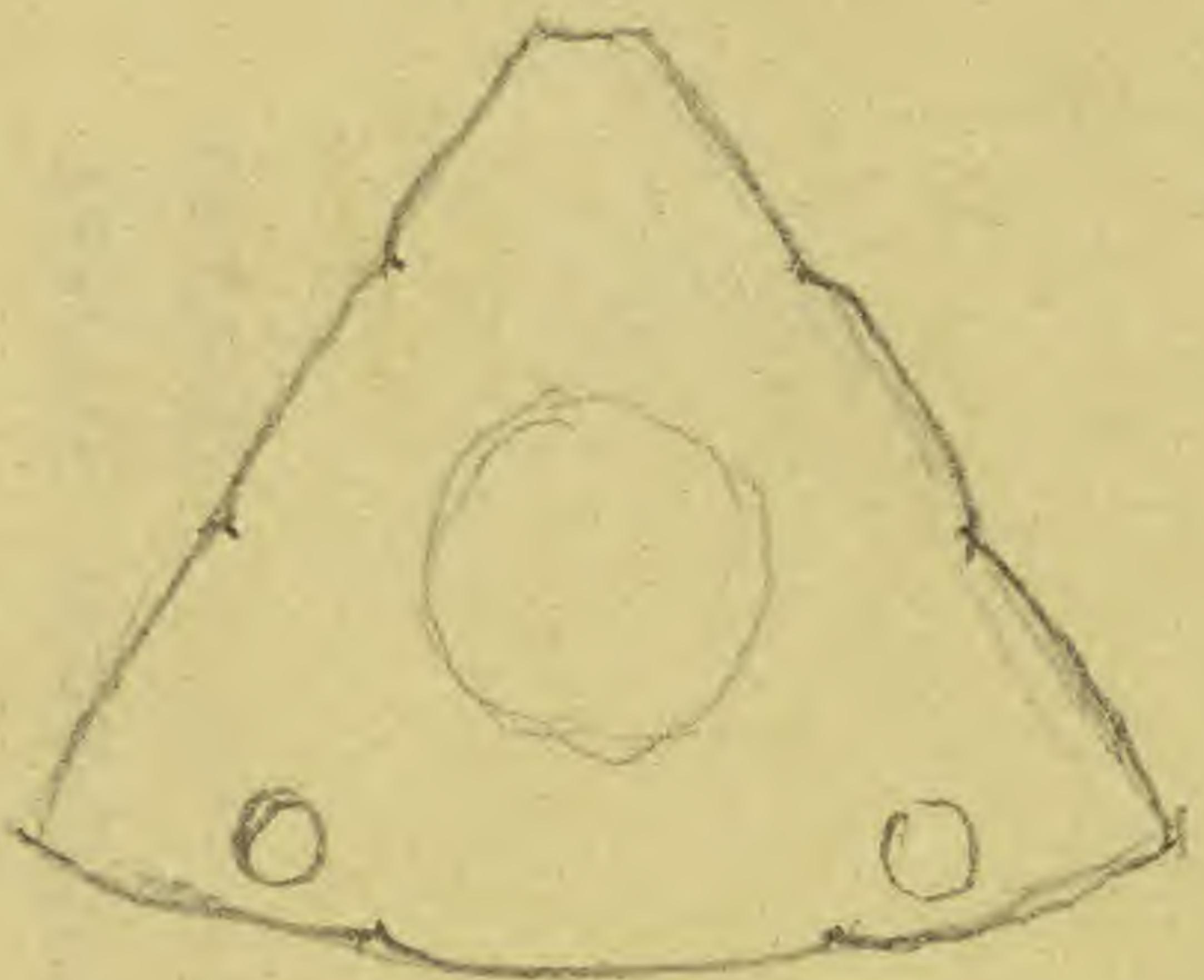
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*P. flexilis*

Olarache Mts., Calif. Alt. rock 3500  
1875

April 30 1878



hypoderm cells all around  
but sparing on the base  
Ducts without hypoderm.  
very much on the sides



0 1 2 3 4 5 6 7 8 9 10

cm

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11016

Geo. Engelmann, M. D.,  
No. 3003 Locust Street,  
Philadelphia, Pa., 1879

APOTHECARY,  
No. 2600 Laclede Ave., S. W. Cor. Jefferson Ave.,  
St. Louis, Mo.

No. \_\_\_\_\_ Date, \_\_\_\_\_

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*P. flexilis* Tengstroem

April 26 1878

Hayden, Great Smoky Mts.

x 30



very few hypoderm cells  
at the 3 corners  
none around the ducts

~~which San Fransisco plant  
with large cone, has  
the same compact~~

~~has an stomata - series  
on back~~



0 1 2 3 4 5 6 7 8 9 10

cm

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No. ....

Date, ....

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JF



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